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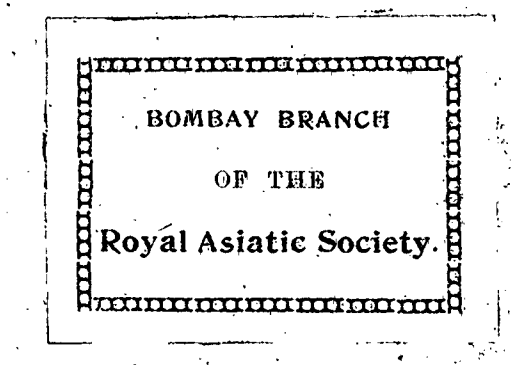

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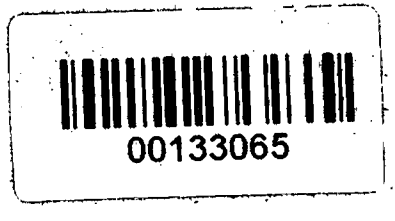
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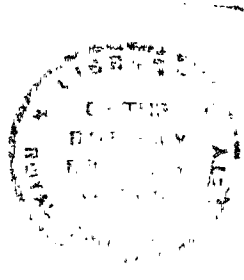

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PREFACE.

THIS review is issued as a companion volume to the annual report "Bihar and Orissa in 1922". It corresponds to and supersedes the chapters in the old Administration report, which were known as "the Red Letter Chapters", and is intended to give an introductory account of the administrative history, constitution, economic and industrial resources, and systems of land tenure throughout the province, and of the various changes that have occurred during the last ten years. It is intended to be more in the nature of a handy book of reference than a connected narrative and it repeats and brings up to date the information in the last decennial report. A new feature in this year's review is the chapter on the Archæology of the province, which has been contributed by Mr. J. A. Page, Superintendent, Archæological Survey, Central Circle. The review will not be issued annually, but it is intended to revise and reissue it every ten years.

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CHAPTER I.

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(a) *Physical Features.*

Area and boundaries.

The province of Bihar and Orissa lies betwen 19 02′ and 27 30′ N. latitude and between 82 31′ and 88 26′ E. longitude and includes Bihar, Orissa and Chota Nagpur. The province is bounded on the north by Nepal and the Darjeeling district of Bengal; on the east by Bengal; on the south by the Bays of Bengal and Madras; and on the west by the United Provinces of Agra and Oudh and the Central Provinces. The area of British territory which constitutes the Governorship of Bihar and Orissa is 83,180 square miles inclusive of the area of large rivers. In addition to the districts which are directly under British rule, there are groups of Feudatory States in Chota Nagpur and Orissa which are governed each by its own Chief, under the superintendence, and with the advice of a Political Agent appointed by Government. The area of these territories is 28,648 square miles, and as it is usual to include them when speaking of Bihar and Orissa, the area of the whole Province is 111, 828 square miles. The province can be divided geographically into three parts of which two, Bihar and Orissa, consist of great river valleys and the third, Chota Nagpur, is a mountainous region which separates them from the central Indian plateau. Orissa embraces the rich deltas of the Mahanadi and the neighbouring rivers and is bounded by the Bay of Bengal on the south-east, and walled in on the north-west by the hilly country of the Feudatory States. Bihar lies on the north of the province and comprises the higher valleys of the Ganges, from the spot where it issues from the United Provinces. Between Bihar and Orissa, but stretching further westward, and deep into the hill country, lies Chota Nagpur.

The province contains tracts presenting many diverse features. The rich alluvial of plains of Bihar abound in produce of all kinds,

rice, indigo, innumerable grains and pulses, oilseeds of various kinds, cotton, tobacco, sugarcane and, where the rainfall is sufficient and the soil suitable, jute and other fibres. The slopes, which cover most of Chota Nagpur, are rich in minerals and provide 65 per cent. of the total output of India. They also contain very valuable deposits of iron-ore and other minerals. Chota Nagpur also contains valuable forests, as does Orissa, though the resources of the latter division are mainly agricultural.

Railways.

The length of railways completed and open for traffic on 31st March 1922 is shown below :—

Railways.	Miles.
Bengal and North-Western Railways	982·48
Bengal-Nagpur Railway	950·50
Eastern Bengal Railway	170·00
East Indian Railway	1,023·54
Darjeeling-Himalayan Railway	37·86
Total ...	3,164·38
Light Railways.	
Arrah-Sasaram	65·26
Bakhtiarpur-Bihar	33·00
Dehri-Rohtas	23·83
Futwa-Islampur	27·00
Total ...	149·09

Canals.

A list of the canals in the Province is given below :—

Orissa Canals.	Miles.
Main and Branch Canals	327½
Of which navigable	205½
Distributary Channels	1,295½
Orissa Coast Canal.	
Main and Branch Canals for navigation only	95½
Son Canals.	
Main and Branch Canals (Irrigation)	357½½
Of which navigable	199½
Distributary channels	1,236½
Tribeni Canal.	
Main Canal (for irrigation only)	61½
Dhaka Canal.	
Main and Branch Canals (irrigation)	19½
Distributary Channels	32½

Teur Canal.					Miles.
Main Canals (Irrgation)	...	...	...	...	6½
Distributary Channels	...	...	...	...	6½
Saran Canals.					
Main and Branch Canals (Irrigation only)			...	...	closed.

Rivers.

The Ganges enters Bihar from United Provinces of Agra and Oudh near Ghazipur; shortly after entering the province it is joined by the Gogra on the north bank, the Sone on the south, and the Gandak again on the north, at Hajipur, and these are all rivers of considerable volume. The Ganges itself maintains an easterly course. The Kosi joins it below Bhagalpur, after which the river turns the corner of the Rajmahal hills and enters the province of Bengal. The Subarnarekha, the Baitarani, and the Mahanadi or "great river" of Orissa flow generally parallel to one another, and follow a south-easterly course, the two former rising in Chota Nagpur and the latter in the Central Provinces.

Mountains.

The Rajmahal hills, which cover an area of about 1,366 square miles, form an isolated group, the north-eastern extremity of which ends near the town of that name, round which the Ganges flows. They are the first connected high ground seen by a traveller ascending the Ganges. South-west of these are broken, detached hills of considerable height, some of which can be seen on the Chord Line between Raniganj and Lakhiserai. The highest of these hills is Parasnath, which rises to a height of 4,480 feet. In 1858 Parasnath was selected as a convalescent depôt for European troops, but in 1868 it was abandoned; the water supply proved sufficient for only 60 to 80 men, the plateau at the summit was too confined for exercise, and the solitude and quiet had a depressing effect on invalid soldiers. These hills appear geographically as irregular links between the Rajmahal hills and the plateau of Chota Nagpur, which is hilly almost throughout, covered with jungle over a considerable part of its surface, and much less densely populated than the rest of the province. The Kaimur hills on the eastern portion of the Vindhya Range, on which is situated the ruined fort of Rohtas, extend to the south of Shahabad district. To the south of Chota Nagpur, on the west side of Orissa, are the Orissa Feudatory States, which are chiefly composed of hilly country. The hills run parallel to the line of coast from north-east to south-west as far as the Chilka lake,

near the south-west extremity of the province, and are covered with valuable sal forests.

Lakes.

The Chilka lake, which is situated in the south-east corner of of the Puri district in the Orissa division, is pear-shaped. Its maximum length is 44 miles and its northern half has a mean breadth of about 13 miles, while the southern half tapers into an irregularly curved point, barely averaging five miles in width. Its smallest area is 344 square miles in the dry weather, increasing to about 450 during rainy season. The average depth of the lake is from three to five feet scarcely any where exceeding six feet. Besides the Chilka, there is no other lake of any importance, though there are innumerable *jhils* or shallow sheets of water.

Soils.

Broadly speaking the province may be divided into two great areas (*a*) the alluvial tract, and (*b*) the gneissic tract. The former is a part of the great Indo-Gangetic plain, while the latter is a continuation of the great tableland of Central India. The alluvial tract comprises almost the whole of Bihar and the coast fringe of Orissa, while the districts of the Chota Nagpur Division, the Santal Parganas, the southern portion of the districts of Shahabad, Patna, Gaya and Bhagalpur, and the Feudatory States of Orissa belong to the gneissic area.

Alluvial tract.

It has been customary to devide the alluvial tract, which consists of sand and clay brought down by the great rivers, into two classes, the older alluvium and the newer alluvium. The province of Bihar and Orissa contains very little of the latter type. In fact, with the exception of the Mahanadi delta and the diaras of the great rivers, almost the whole of the alluvial area consists of the older variety, and is subjected more frequently to denudation than to deposition. This older alluvium usually consists of alternating beds of sand and clay, frequently containing large quantities of kankar or nodules of carbonate of lime. Beneath the clay beds water-bearing strata, in which water exists at considerable pressure in the hot weather, are frequently found more particularly in western Bihar.

The surface features of the older alluvium are varied in character. This is mainly due to differences of level but partly also to general differences in chemical and physical composition.

Hence although, as a general rule, any crop can be grown in any district, yet in practice it is found that certain crops flourish much more in certain districts than in others. A case in point is tobacco which is grown very widely in certain areas, and hardly at all in others. Such a marked preference of a crop for the soil of a certain district must point to marked peculiarities in the soil of that area, peculiarities which may be due, either to differences of level or to differences in the character of the sediment brought down by the rivers, to whose influence the formation of the alluvium has been due. It is probable in fact, that each river basin has its own generally characters. For instance, in the Darbhanga district a yellow sandy loam is the prevailing soil south of the Burh Gandak river, a blackish clayey loam in the doab between the Baghmati and Burh Gandak, and a heavy clay, almost white, north of the Baghmati river.

The older alluvium.

Again the chemical characteristics of soil in different river basin is extremely varied. Soils have been analysed from Tirhut which contained as much as 20 per cent. of lime and, in fact a high percentage of lime is a common characteristic of all soils over a great tract of country in that part of the province. On the other hand, soils from south of the Ganges, as a rule, are by no means rich in lime and it is possible that many of the marked differences between the crops in different tracts may be due to such variations.

The new alluvium is of very little importance in this province. With the exception of a few isolated *jhils* in Bihar, of the delta of the Mahanadi in Orissa, and of the diaras of all rivers there is little soil that can be classed under this heading. The general characteristic of such soil is that it is richer in plant foods than the old alluvium, particularly in nitrogen in which the older soil is markedly deficient.

The new alluvium.

The gneissic soil has been formed by the decomposition of highly foliated crystalline rocks, composed of quartz, felspar and mica. The soil has been formed *in situ*, while alluvial soil is, of course, composed of transported particles washed down by the rivers. The gneissic tract in Bihar and Chota Nagpur consists of a high undulating tableland fringed by hills, and extensive jungle, and stands out in sharp contrast to the alluvial area. In the northern part of this

The gneissic area.

tableland, much valuable rice land has been prepared by laborious terracing of the slopes. In Ranchi also, in the depressions lying betwen successive ridges there is a good deal of rice cultivation. Maize, millets, oilseeds and pulses are grown in the uplands but the steeper hillsides are mostly barren.

Laterite soils.

Laterite soils which, strictly speaking, cannot be included either as alluvial or gneissic are found outcropping from the old alluvium in certain parts of Orissa, and also in the higher parts of the Chota Nagpur plateau. They consist of nodules of brown haematite and coarse quartz sand, cemented together into a more or less coherent mass but at times remaining in a loose gravelly condition. They pass by various gradations into a sandy clay with a few ferruginous nodules. As a rule these soils are very poor in the essential ingredients for plant life.

Rice is the chief crop in all districts of the province and except in certain specific cases, such as jute and tobacco, the cultivator pays little attention to the composition of the soil of his fields, but is actuated in his choice of crop more by the amount of water that he can obtain. It is therefore difficult to assign special types of soil to specific crops. So far however as this is possible the table below gives the main types of soil and the crops grown on each.

Soil.	Crops.	Remarks.
Clay soil ...	Winter rice except in low lying places which are flooded till late November. On such lands *rabi* crops such as pulses are chiefly grown.	
Clay loam ...	*Rabi* crops in the high lands. Winter paddy on the low lands. Good for sugarcane on high lands.	
Loam ...	Mainly *rabi* crops. Good land for sugarcane.	
Sandy loam ..	*Rabi* crops and maize	This soil appears to be particularly favourable for tobacco.
Sand ...	Cucurbita are grown on the sandy *chars* along rivers.	

(b) Climate.

The climate of the greater part of Bihar and Orissa is somewhat different from that of Bengal. The mean annual temperature varies from 82° at Cuttack to 75° on the plateau of Chota Nagpur. Over practically the whole province May is the warmest month, with mean temperatures between 85° and 94°. In June after the beginning of of the rains there is a fall and during the next three months the readings range from 78° and 85°. A comparatively rapid fall occurs during the next three months and the December temperature nowhere exceeds 71°, while in Bihar and Chota Nagpur it is generally below 64°. In Orissa and Chota Nagpur December is the coolest month of the year, but in Bihar the January temperatures are slightly lower than those of December. The highest afternoon temperatures are generally recorded in May in Orissa, Chota Nagpur and the west of Bihar, in April in the eastern half of Bihar where the heat of May is somewhat mitigated by the moist easterly winds that are intermittently experienced. These afternoon temperatures vary between 96° and 105° in Bihar, between 99° and 106° in Chota Nagpur and between 90° and 106° in Orissa. The highest afternoon temperatures yet recorded vary between 102° and 118°. The night temperature of the coldest months, December and January, averages about 51° in Bihar and Chota Nagpur, and 57° in Orissa; in the latter area it does not fall below 40° but frost occurs in Bihar and is not uncommon in the higher parts of Chota Nagpur.

Temperature.

The mean daily range of temperature is smallest on the coast, and is on the whole nearly twice as large in the dry season as in the rainy season from June to September.

On the mean of the year, the humidity is lowest on the high ground of Chota Nagpur and thence increases both northwards and southwards being greatest on the coast of Orissa. It averages about 84 per cent. at Puri and False Point on the one hand and at Purnea on the other, 80 at Darbhanga and Cuttack, 77 at Chaibasa, about 71 at Gaya and Sambalpur, 66 at Ranchi and 63 at Hazaribagh. On the coast the variation during the year is small, the monthly values varying between 88 and 75, but at the inland stations, the range is large, thus the average humidity at 8 A. M., at Hazaribagh varies from 36 in April to 87 in August and at Patna from 51 in April to 87 in August.

Humidity.

In Bihar and Chota Nagpur the first five and the last two months of the year are the most free from cloud, the average proportion of cloud-covered sky being in general below one-fourth of the total expanse. With the advent of the monsoon in June the cloudiness increases rapidly, and in July and August the sky is about three-fourths covered. In September, with the weakening of the monsoon, the quantity of cloud diminishes, and by the middle of October the sky has become almost free from cloud. In Orissa the sky is on the whole more cloudy than in Chota Nagpur and Bihar, particularly so on the coast, where on the average of the year about one-half of the sky is clouded over. December is on the whole the brightest month of the year, but November, January and February are nearly as clear. The cloudiest season in the year is from June to August when on the average at least three-fourths of the whole sky is covered with cloud.

Cloud.

In Chota Nagpur the wind is unsteady in the rainy season from June to September, but during the rest of the year it forms part of the movement down the Gangetic plain, and is generally from between west and north-north-west in direction. In Bihar the prevailing wind is from west or west-north-west during the dry season from November to March, in April damp easterly winds being to blow at intervals, particularly in the neighbourhood of the hills, and intensifying during May hold possession of practically the whole area from June to September. In Orissa north to north-east winds prevail from about the middle of October to the earlier part of February: then winds of direction from between south and south-west set in on the coast, and, strengthening gradually, blow with great steadiness during the hot and rainy seasons.

Wind.

The province lies within the zone influenced by winter storms, and experiences occasional light rain during the first two months of the year. During the next three months the precipitation is heavier, particularly in may, and is due mainly to thunderstorms and hailstorms. The rains set in about the middle of June, and in Bihar and Chota Nagpur usually last up to the second week of October, and in Orissa three or four weeks longer. Little rain falls during the rest of the year.

Rainfall.

The annual rainfall averages nearly 59 inches in Orissa, 53 inches in Chota Nagpur and 49 inches in Bihar. Speaking

broadly, about 90 per cent. of the total fall is received from the west monsoon which lasts practically from June to October and only about 10 per cent. during the remaining seven months.

The driest month in the year is December with only thirteen cents of rain and the rainiest is August with an average fall of about 13 inches. The districts of Purnea, Cuttack and Balasore are those of heaviest rainfall. Their normal annual fall is 68, 60 and 59 inches respectively, and in a few places it exceeds 75 inches. The region of lowest rainfall includes the Shahabad, Gaya, Patna, and Saran districts where the average annual fall is about 44 inches. Rainfall is generally regular in its incidence in Chota Nagpur, but is comparatively precarious in Bihar and Orissa, and severe droughts are of occasional occurrence there.

Occurrence of local down-pours.

In Patna the largest annual fall on record is that of 1886 when it amounted to 65·55 inches, and the smallest is that of 1843 when the total recorded fall was only 21·82 inches. The heaviest fall in 24 hours during the past 21 years is 13·80 inches recorded on June 25, 1897. One of the most remarkable features of the rainfall is the occasional occurrence during the rains of exceptional local down-pours during very short intervals. These appear to occur chiefly along the Himalayas. Thus on the 13th September 1879 a total rainfall of 35·38 inches was registered at Purnea for the previous 24 hours, whilst at the neighbouring stations of Madhupur, Bhagalpur, Araria, and Kishanganj the rainfall for the same period was 9·5, 1·35, 2·58 and 0·89 inches respectively. Such down-pours are usually associated with cyclonic storms. During the last ten years there were two particularly noteworthy down-pours. The first of these occurred in the beginning of August 1917, when a cloudburst passed from east to west along the northern edge of the Chota Nagpur plateau. The rainfall in the area affected rose in some places to over 24 inches in 48 hours; the ensuing flood was accompanied by some loss of life and considerable damage was done to railways and district board roads, and the houses and crops of the people. The second occurred in Saran district in 1921, when in one night 20 inches of rain fell at Siwan and the raingauge at Chapra was flooded. This rainfall caused a sudden flood which was to a certain extent aggravated by railway embankments and did a large amount of damage.

Besides the short-lived disturbances, thunderstorms and nor-westers, which occur occasionally during the hot season from February to May, the southern part of the province is often visited during the rainy season by cyclonic storms. As a rule these storms are not severe, but very occasionally they are of great intensity and cause great damage. The False Point cyclone of September 1885, for instance, caused extremely rough weather, and was accompanied by a storm wave which destroyed the station, the water rising to a height of about 22 feet above mean sea-level.

Storms.

Partly owing to its geographical conditions and partly owing to the occurrence of the local down-pours and storms referred to above, floods are of fairly frequent occurrence in various parts of the province. It is unnecessary here to describe in detail the various floods that have occurred, but among the most serious mention may be made of the Orissa floods in 1913 and 1920, of the Darbhanga floods of 1906 besides the floods in the Patna and Gaya districts in 1917 and in Saran in 1921 to which reference has been made above.

Floods.

(c) *Chief Crops.*

Rice has been a valued food crop in India from the earliest times, the name by which it is generally known is *dhan or dhanya* signifying in Sanskrit " the supporter or nourisher of mankind." In Bihar and Orissa excluding the Feudatory States 14,937,700 acres were cultivated with his crop in 1920-21, which formed 28 per cent. of the gross area and 48 per cent. of the cropped area of the province.

Rice.

There are innumerable varieties of rice familiar to cultivators under distinctive names and possessing peculiar properties. In a general way they can all be classed in three main groups according to the season of the year when they are reaped—(1) *aus, bhadoi* or autumn rice (2) *aman* or winter rice, subdivided into *katki* and *aghani* and (3) *boro* or spring rice.

Seasonal classes.

Autumn rice is generally cultivated in comparatively high lands, which are above inundation level, and requires less water but more attention in its cultivation than other classes of rice. As a general rule it is sown broadcast in April and May with the first showers

Autumn rice.

of rain, and harvested in July, August and September. It occupies the land for a comparatively shorter period than winter rice, its outturn is generally less and its price lower in the market. But it serves a very useful purpose in supplying a food-grain and fodder at a time of the year when the stock of rice of the previous year is approaching exhaustion. Besides it releases the land in time to be cultivated with a *rabi* crop.

Winter rice.

Winter rice is cultivated in lower lands where rain water can be accumulated or where irrigaion facilities exist. It is generally sown in seed beds in May and June, transplanted in the field about a month later and reaped in November (*Katik*) and December (*Aghan*). In Orissa it is more often broadcasted than transplanted. It includes by far the largest number of varieties of rice and occupies the main portion of the rice area of the province, the varieties differing from one another in fineness, colour and fragrance of the grains—factors which also regulate their prices.

Spring rice.

Spring rice is cultivated on the edges of *jhils*, tanks and other marshy places. The seed is either broadcasted or sown in seed beds and transplanted in November and December or even January and February, depending on the situation of the land, and is harvested in April and May or June and July. The varieties of rice belonging to this class are generally coarse and are said to be less nutritious than other varieties.

Deep water paddy.

In certain districts varieties of paddy known as deep water paddy are grown in *jhils* and other lowlying places liable to flood. The essential condition of success in the cultivation of deep water paddy is that the flood water should rise slowly, the growth of the paddy though usually very rapid, should be able to keep pace with the rise of the water. Under these conditions the paddy will sometimes grow to the height of fifteen or twenty feet.

Average outturn per acre.

It is difficult to give the average outturn of paddy for the province with accuracy. In a general way it may be said to vary between ten and twenty maunds per acre while a heavy crop may exceed thirty maunds. The average outturn of cleaned winter rice in the province has been estimated at 900 lbs. per acre.

Rice being the principal staple of the province its improvement by selection soon became the chief aim of the Agricultural Department. As a preliminary to this a survey of the existing varieties was undertaken. The amount of work involved can be judged by the fact that in two years nearly 400 reputed varieties were collected from the three districts of Cuttack, Puri and Sambalpur only. Many of these were found to contain mixtures of two or more types, while many of the samples were found to differ from one another in nothing else but name. A necessary preliminary was therefore to select homogenous types, and this was undertaken in the department's Central Farms at Sabour (Bhagalpur), in South Bihar, Kanke (Ranchi) in Chota Nagur and at Cuttack in Orissa.

Improvements introduced by the Agricultural Department.

The most promissing of these types so far is known as Dahia. It was selected at the Sabour Farm, and has already established its claim to be the leading paddy for South Bhagalpur conditions. Its extension in this area where it now covers 5,000 acres is being further pushed by the department, and it is being tried throughout the province.

Dahia paddy.

An experiment in green manuring paddy with *dhaincha* treated with Superphosphate has been found very sucessful in South Bhagalpur while green-manuring of broadcasted paddy with *dhaincha* has attracted considerable attention in Orissa on account of its great simplicity.

Green manuring with dhaincha.

Wheat occupied 1,100,000 acres in the province in 1920-21. It is chiefly grown in Bihar but is also cultivated to some extent in Chota Nagpur and to a lesser extent in Orissa. Many varieties of wheat are grown in the province both white and red, soft and hard. A very superior soft white wheat, which is equal to the best Delhi or Muzaffarnagar wheat, is extensively grown in the southern part of the subdivisions of Buxar and Sasaram in the district of Shahabad. In Bhagalpur chiefly the red varieties are grown. Wheat is sown in the latter half of October and harvested in March, the outturn depending very much on the extent to which the crop is manured and irrigated. The average outturn for Bihar is estimated at about eight maunds per acre. Wheat not only forms an important food

Wheat.

crop of Bihar but is also largely exported to Calcutta from the districts of Patna and Bhagalpur.

Pusa wheat.

As a result of scientific work done at Pusa on wheat several superior types have been evolved. Of these Pusa wheat No. 12 is now widely grown in Bihar. Another type known as Pusa wheat No. 4 has been found to be very successful in the flooded tracts of Orissa where a shorter *rabi* season prevails. Its cultivation in areas where the paddy crop is precarious or has been destroyed by flood is likely to be of great advantage in that division.

Barley.

Barley was cultivated on some 1,300,000 acres in 1920-21. Its cultivation is practically confined to the districts of Bihar where it forms one of the cheapest food crops. Like wheat and most *rabi* crops it is grown on uplands or on high lying paddy lands or on flooded land after the water has subsided. It is sown towards the end of October or early in November and harvested in March. The outturn is about ten maunds per acre. The grain is ground into a course meal, and made into *chapatis* either by itself or mixed with wheat meal *kerao*, *khesari* or other kinds of *dal* or with Indian corn. It is also parched and ground into coarse flour and eaten in the same state as it comes from the grindstone, having been cooked in the drying.

Maize.

Mazie (*Makai* or Indian corn) is cultivated chiefly in Bihar and Chota Nagpur. The area covered by this crop in 1920-21 is 1,750,000 acres. Maize is sown at the commencement of the rains and harvested in September. The outturn is about ten or twelve maunds per acre. It is cheaper than wheat or barley but is dearer than *marua* and other inferior millets. It is prepared and eaten like barley. To some extent it is also eaten in the green state by roasting the cobs while they are yet immature. In the Gangetic *diaras* where vast areas are sown with maize, the crop is frequently damaged by flood.

Marua and kodo.

Marua and *kodo* are largely cultivated in the Province and consumed by the poorer classes. *Marua* is a fairly important crop in Bihar and Chota Nagpur. It is sown in May and June and harvested in September and October. The seed is either sown broadcast or

in seed beds and transplanted. The outturn is about ten maunds per acre. The grain is generally converted into flour which is used for making bread. *Kodo* is also a popular food-grain with the poorer classes as it can be readily grown on inferior soil. It is usually eaten boiled in water like rice. *Kauni* and *cheena* are also largely cultivated and consumed by the poorer classes. *Kauni* is generally sown in June and harvested in August or September. *Cheena* may be sown almost at any season. These grains are eaten boiled like rice. *Jowar* or *janera* (in Tirhoot) and *bajra* are also millets of some importance in Bihar and Chota Nagpur, the former not only yields a nourishing food grain but also a valuable fodder for the cattle, while the dry stalks are used as fuel. The grains of *jowar* are made into flour and used for making bread.

Kauni and cheena.

Jowar and bajra.

Pulses or *dal* are important crops and are extensively cultivated in the province. The principal pulses are gram, pea, lentil, *kelai*, *mung* and *rahar*. All these, except the last, are sown after the cessation of the rains and reaped in the cold weather. *Kelai* and *moong* are also grown as *bhadoi* crops. There are three varieties of *rahar* known according to the time of their maturity as *katki*, harvested in November, *maghi*, harvested in January and *chaitali* harvested in March or April. The last named is the most common as it gives the greatest outturn and a *dal* of better quality. *Rahar* is a hard crop and will grow on almost any soil. It is sown at the commencement of the rains, usually with some other crop such as maize, which is harvested in September, the *rahar* being left over until it is ready to be harvested. The outturn is about 10 to 15 maunds per acre. The stalks of the *rahar* plants are woody and are generally used as fuel. Pulses are not only largely consumed in the province but there is always a surplus for export.

Pulses or dal.

Breeding work on gram at Pusa has resulted in the production of some superior types of which Pusa No. 24 has been found by experiments at Sabour to be considerably superior to our local varieties both in yield and in taste. Similar work is also in progress at Sabour and is expected to lead to useful results. The field peas have been studied at Sabour and some improved strains have been obtained which are being introduced in the districts.

Oil seeds are largely cultivated in the Province both for food purposes and for export. Oil is also used to a considerable extent for application to the body. Its use for lighting purposes has been largely superseded by kerosine oil. The area cultivated with various kinds of oil seeds in 1920-21 was about 2,000,000 acres. Linseed, mustard and rapeseed and sesamum or *til* are the most important. The minor oil seeds include castor, *sarguja* and popy. 4,330,000 maunds of oil seeds were exported from the province in 1920-21.

Oil seeds.

Linseed is cultivated as a cold weather crop. Its outturn is about 6 maunds per acre but it is usually grown mixed with other crops. Its local use is limited but it is extensively exported to western countries. In 1920-21 roughly 650,000 acres were cultivated with linseed and 2,500,000 maunds of the seed were exported from the province.

Linseed.

Mustard and rape seeds are cultivated to a greater or less extent in every district but the chief centre is in North Bihar. The area cultivated with these crops in 1920-21 was 775,000 acres. There are several varieties of mustard and rape, some are suited for cultivation only in comparatively rich lands near the villages while others requiring less care and attention in their cultivation are grown in *diara* lands. All the varieties are sown as cold weather crops either by themselves or mixed with other crops. The outturn is about 6 maunds per acre. Although a considerable quantity of mustard and rape seeds is exported, they are most largely utilized in the province for expressing oil. The oil cake is used as food for cattle.

Mustard and rape seed.

The cultivation of sesamum is less important than linseed, or mustard. There are two chief varieties—one is grown as a *kharif* crop which is sown in July to September and gathered during November and December, the other is a summer crop sown between January and March and harvested in June and July. The outturn is about 4½ maunds per acre.

Sesamum.

Cultivation of ground-nuts has been introduced by the Agricultural Department in Orissa and South Bihar where the crop is gradually extending. Its great intrinsic value and the fact that it can be grown in comparatively poor soil are in favour of its more extensive cultivation in the poorer sandy tracts of the province.

Ground-nut.

Sugarcane is cultivated to some extent in every district. The area in the province under this crop in 1920-21 has been estimated at about 286,000 acres. There are many varieties; some are grown as chewing canes but the majority are grown for making *gur*. The manufacture of sugar from *gur* by native methods, which at one time was a thriving business, has gradually diminished on account of competition with bounty fed beet sugar and importation of cane sugar from Java, Mauritius, and the Straits Settlements; so that manufacture of sugar by native methods is now confined only to isolated localities. Owing however to the rise in the prices of imported sugar in recent years not only the cultivation of sugarcane, but also the manufacture of sugar has received a great impetus. The fall of indigo prices has led many planters in North Bihar to exchange its cultivation for sugarcane and factories are springing up in that part of the province for the manufacture of refined sugar. In view of the growing importance of this crop the Agricultural Department has taken up its study on all its farms. At Sabour the indigenous canes have been classified and their sugar contents analysed. At Sepaya in North Bihar many varieties of indigenous and imported canes are being grown and compared. At Ranchi and Cuttack varieties are being tested for yield. Experiments at Ranchi have shown that by proper draining and manuring of paddy land three times the weight of cane usually grown per acre in the province can be obtained. Iron mills, improved furances and shallow iron pans are coming into general use in the manufacture of *gur* in the province.

Sugarcane.

Vegetables in some form or other are invariably eaten with meals. Chief among them are brinjals, gourds of various kinds, country beans and *sag*. Onion, radish, *katchu* and other tuberous rooted crops are also largely cultivated and consumed in the villages while in the neighbourhood of large towns English vegetables such as cabbages, cauliflowers, garden peas, beans, beet, carrot, turnip and tomatoes are also cultivated. Vegetable gardening in the neighbourhood of large towns is a profitable business and is capable of considerable improvement.

Vegetables.

Potatoes are extensively cultivated in Bihar. Their cultivation in Orissa, which is of recent introduction, is also on the increase. The crop is sown in October and November and harvested in

Potato.

February and March. It is heavily manured and irrigated. The outturn is about 200-250 maunds per acre. There are several varieties to be met with which may be grouped into *deshi* and hill varieties. The hill varieties are said to deteriorate unless the seed tubers are renewed every second or third year.

Condiments.

Condiments are important ingredients in the cooking of Indian food. They are largely used in vegetable, fish or meat curries and include turmeric, ginger, chillie or red peper, coriander and aniseed. All these are cultivated in the province. Black pepper and cummin which are also largely used in cooking do not grow in the province.

Fruits.

The fruits which are most largely cultivated in the province, are mango, litchi, jack, guava, custard apple, pine apple, plantain, coconut, melon and water melon. Of these, the mangoes of Darbhanga and Bhagalpur are famous and are largely exported to Calcutta; their cultivation is very paying; Muzaffarpur is famous for litchies, while the Gangetic *diara* produces excellent melons and water melons. Pine apples, plantain and coconut are largely grown in Orissa while custard apple grows wild in the province and is largely exported from the Santal Parganas.

Betel-nut.

Betel nut is cultivated to a small extent in Orissa. Its cultivation is fairly profitable. The palm bears fruit in the eighth year and is most productive from that time to the sixteenth year when the yield falls off. The nuts are gathered in November. *Pan* or betel leaf is grown in the province to a small extent in specially prepared gardens. The cultivation of the plant requires constant care but is highly remunerative.

Pan or betel-leaf.

Tobacco.

Tobacco is grown more or less in every district for local consumption. In North Bihar it is also largely grown for export. The districts having the largest areas under tobacco are Darbhanga, Purnea, and Muzaffarpur. The total area cultivated with this crop in the province during 1920-21 was about 117,400 acres. There are several varieties of tobacco to be met with and as its cultivation is very profitable it is generally grown with great care on well manured lands. The seedlings are reared in nurseries in August, September or October and transplanted into the fields when they are about a

month old and the crop is gathered in January, February or March. The outturn is about 18-20 maunds per acre. A large amount of botanical work has been done at Pusa to improve the quality and yield of this crop. Pusa type No. 28 has been found to do very well in Tirhoot both for general cultivation and for cigarette making. Its extension in this area has therefore been taken up by the Indian Leaf Tobacco Development Company. The heavy duties now imposed on imported tobacco, naturally, stimulate the cultivation of this and other finer grades of tobacco throughout the country.

Cotton.

The production of cotton cannot be said to form at present an important industry of the province. Its cultivation is confined to about 78,000 acres. The districts where cotton is cultivated to any appreciable extent are Saran, the Santal Parganas and Ranchi. The climate of the province is against the cultivation of cotton; but an attempt is being made by the Agricultural Department to discover varieties that will stand the heavy monsoon rainfall.

Jute.

Jute is cultivated almost exclusively in the districts of Purnea and Cuttack. The seed is sown broadcast from April to June and the cutting of the crop is done from August to October, the plant having by this time grown to the height of five to ten feet. The average outturn of jute is estimated at about fifteen maunds of fibre per acre. The principal jute marts are at Kishanganj and Forbesganj in Purnea and at Kendrapara in Cuttack. On account of its minor importance in the province the Agricultural Department has confined its work on this crop to comparative trials of Bengal's best type, namely, Kakaya No. 7 with local ones. The result both at Cuttack and at Purnea was in favour of Kakaya No. 7 in yield as well as in the quality of fibre. Its cultivation has therefore been encouraged by the department in these districts.

Sunnhemp and Deccan hemp.

The cultivation of sunnhemp in this province is limited. The crop is sown in May or June and harvested in August or September. Its chief local use is in the manufacture of fishing nets and cordage for boats. Its use as a green-manuring crop for fertilising poor soils is encouraged by the Agricultural Department. Deccan hemp, known in Bihar as *pattua* or *kudrum* and in Orissa as *kanuria* is also grown to a small extent in the province, chiefly in Chota Nagpur. Rocky and laterite soils which are not suitable

for jute cultivation are well adapted for the cultivation of this crop. If harvested when the plants are just in flower it is said to give a type of fibre which is considered superior to jute.

Dhaincha.

The cultivation of *dhaincha* is also very limited except in Orissa. It grows best in low wet lands. The plants grow to the height of ten to twelve feet yielding fibres which are six to eight feet in length. The fibres are considered to be more durable in water than jute or sunnfibres; hence they are used by fishermen for drag ropes for their nets. The use of *dhaincha* plants for green-manuring paddy has been introduced by the Agriculture Department with great success in Orissa.

Flax.

Although botanically the plant which yields linseed is the same as the plant which yields flax its cultivation for fibre is practically unknown in the province. Experiments conducted in Daoriah factory showed that flax can be profitably cultivated in Bihar without irrigation as a cold weather crop, but at present its cultivation in the province has not been taken up seriously.

Indigo.

After the advent of synthetic indigo the cultivation of the plant has declined. It slightly recovered during the War but its future is very uncertain as the artificial product is again in the market. In 1900-1901, 270,100 acres were cultivated with this crop, in 1910-11, 109,600 acres were cultivated and in 1920-21 only 44,400 acres were grown. In North Bihar indigo is cultivated with great care. It is generally sown on high lands above the reach of the annual flood. The Java variety is sown in September and October and the Sumatrana variety in February and March. The crop is cut in June, July and August, and a second crop is obtained in September and October. When cut the leaves are taken to the factory to be steeped in large vats for about ten hours until the process of fermentation is complete. The water is then poured out into a second vat and subjected to a brisk beating the effect of which is to separate the particles of dye and cause them to settle at the bottom. Finally the sediment is boiled, strained, and made up into cakes. A great deal of work in connection with the growing and manufacture of indigo has been done at Pusa and recent reports issued from that place seem to show that the future of natural indigo is not entirely hopeless.

Safflower.

Safflower is grown mainly for local consumption. It is cultivated on account of the florets which are used as a dye stuff. In most of the darker colours it is used in conjunction with indigo. Its seeds also yield on edible oil.

Tea.

The districts in the province in which tea is cultivated are Ranchi and Hazaribagh in the Chota Nagpur division. At the close of 1921 there were 21 tea-gardens with a total area of 2,155 acres under tea. The total outturn of the year amounted to 172,553 lbs. The average being 80 lbs. per acre of mature plants. With one exception all the tea-gardens in the province are on the Ranchi plateau. The tables below give some particulars of the tea industry as it affects the province, and they clearly show the great decline in the industry during the last ten years.

District.	Number of gardens.	Acreage.		Total.	Area not yet planted.	Outturn in lbs.	Rate of outturn per acre in lbs.	Outturn in 1910 in lbs.
		Mature.	Immature.					
1	2	3	4	5	5	7	8	9
Hazaribagh ...	1	18	12	30	...	690	23	3,064
Ranchi	20	2,025	100	2,125	3,958	171,863	81	271,823
Total ...	21	2,043	112	2,155	3,958	172,553	80	274,887

The following shows the trade of Bihar and Orissa in Indian tea.

Routes.	Imports in maunds.			Exports in maunds.		
	1910-11.	1920-21.	1921-22.	1910-11	1920-21.	1931-23.
1	2	3	4	5	6	7
By rail and river ...	3,350	7,094	5,753	202,645	3,977	2,365

CHAPTER II.

Economic and Industrial Resources.

(a) *Cattle.*

THE province is fortunate in possessing, particularly in Bihar proper, exceptionally good breeding and grazing grounds; the chief of these are along the Ganges, Goghra, Gandak, Son and Kosi rivers, in the Kaimur hills and in the jungles of north Champaran along the Nepal border. The existence of these grazing grounds and the proximity of areas in neighbouring provinces, where there are less favourable facilities for breeding, has resulted in the development of a large export trade, and the average number of cattle known to have been exported between 1918 and 1921, exclusive of sheep and goats, was a hundred and one thousand. The last cattle census which was held in 1920 showed a total cattle population of more than twenty-four millions, including three million seven hundred and seven thousand bulls and bullocks, three million one hundred thousand cows, two hundred and twenty thousand male and one million one hundred thousand female buffaloes, and three million three hundred thousand young stock besides sheep and goats.

Number of grazing grounds.

It is doubtful if Bihar can claim to possess any distinct breeds of cattle clearly distinguishable one from another. Persons familiar with the notable breeds of Upper India contemptuously lump the cattle found in Bihar together describing them as *deshi* or *dehati*, and refusing to recognise among them any breed true to type and constant in characteristics. Whatever may be the decision on this point, it is certain that no district shows an absolute uniform breed universal for a given area, but in any such area a certain percentage of the animals can be picked out which show typical features common to their number, and which must be considered as survivals of a breed which presumably was

Indigenuous breeds of cattle.

more pure in a restricted area in former times, but which with the improvement of communications has become merged among the general cattle population of a larger tract and is on the point of disappearing altogether.

Sitamarhi breed.

The chief indigenuous breed which can be recognised is the Sitamarhi, Bachhaur, or long faced breed. It is so called because it is found principally in the villages of the Sitamarhi subdivision of the Muzaffarpur district and the neighbouring subdivision of the Darbhanga district, Madhubani, but it is not confined to those parts exclusively, as it may be seen in all districts of Bihar. Good bullocks of the breed are fine upstanding animals with large bone and substance, and stand on an average about fifty inches or more at the shoulder. Cows are about forty-five inches at the wither and give about three seers of milk ordinarily, but with care and selection they yield as much as four to six seers. The predominant colour is grey with black points. Other breeds which are recognizable, but which are not so important, are those to be found in the Purnea, Shahabad and Patna districts. The cattle of other districts of Bihar are of the usual *deshi* type and are the result of the crossing of many native breeds. They are smaller than the Sitamarhi breed but quite suitable for the work they are called on to do. In Chota Nagpur and Orissa the cattle are smaller and weedy, on account partly of the scarcity of fodder and water during the greater part of the year, and partly of the want of lime and phosphate in the soil. The bullocks are scarcely ever more than forty-five inches in height, but they are very hardy and turn out good workers, when well fed. Immense numbers of them are imported into Bengal and Calcutta each year for work on the rice fields or for slaughter. The cows give an almost negligible quantity of milk, scarcely ever exceeding a seer. Bullocks in Bihar and Chota Nagpur and Orissa are principally used for cart work and ploughing, but in the cold weather they are employed for pack purposes and carry loads of about one and a half maunds.

Breeds in other parts of the province.

Cattle-breeding.

There is no recognized method of cattle-breeding. Selection is almost unheard of, with the result that a very large amount of inbreeding takes place. *Brahmini* bulls continue to be distributed in Bihar.

Unfortunately the class of animals dedicated in these days is no longer so good as it was, and many wretched specimens are seen that are unworthy to be sires of young calves. One reason for this is that the sanctity of the *brahmini* bull is no longer unimpaired, as in the High Court it has been held that it is no crime to kill a *brahmini* bull for the sake of its flesh and the value of its skin. There are, however, some signs that certain communities are beginning to realise the value of good breeding and are beginning to take corporate action for the maintenance of efficient bulls.

The work of the Veterinary Department in improving cattle-breeding.

The subject of cattle-breeding has received considerable attention from the Veterinary and Agricultural Departments. Formerly the improvement of the breeds of plough cattle—without much attention being paid to the milking qualities—was the object in view, but now that the war has raised the standard of living and the demand for milk has increased owing to the growing populations in the centres of industrial activity, more attention is being paid to milking qualities. Since the transfer of the *deshi* herd from Pusa, the cattle-breeding farm at Bettiah has continued on the same lines, *i.e.*, rearing bull calves and distributing them to selected raiyats and factories on the estates in the Champaran district. The present strength of this herd is two stud bulls, forty cows, fifty bull calves, forty-four heifers and eleven buffalo bulls. The Government cattle farm at Sepaya was started in the year 1913-14 with fifteen cows, twenty-nine heifers, eleven calves and one bull presented by the Maharani of Hathwa. At the end of the year 1921-22, the herd consisted of three stud bulls, one Montgomery bull, eighty-one cows, one hundred and twenty-eight bull calves and fifty-six heifer calves of different ages and one hundred bullocks, or a total of three hundred and sixty-nine animals. As a result of the financial stress and the wishes of the Agricultural Committee to reduce expenditure as much as possible, it has been decided to disband this herd and to keep only such cattle there as are required for cultivation and for the supply of milk to the staff, and the greater of the stock already been disposed of. It is also proposed to utilise the grazing area for young stock from other dairy farms, which the Agricultural Department propose to open in different parts of the province. At present there are two such establishments, one

Cattle farm at Sepaya.

at Sabour, and the other at Kanke near Ranchi, the breeds used being mainly Montgomery; but it is the intention of the Director of Agriculture to use any cow of an indigenous breed so long as it comes within the standard laid down for milk yield, in order that he may be able to raise a strain or breed which, while giving as much milk as possible, will defer to local preferences in less essential points.

Dairy farm at Kanke.

The Pusa institute has taken up the question of crossing cows of the Montgomery breed with British bulls, Ayrshires being used, as they are hardy and give a larger quantity of milk than other British breeds. The results are so far satisfactory in respect of milk yield, and are likely to prove of considerable economic value if carried on for a number of years in order to test the value or otherwise of inter-crossing both in respect of milk yield and working capacity. One of the great drawbacks to the importation of these exotic breeds is their susceptibility to infection by tropical disease.

Pusa herd.

There is no special system of management in vogue. In Bihar cattle are usually well cared for, but in other districts of the province their treatment is such that hundreds die of starvation and disease every year through ignorance and neglect. In Chota Nagpur and Orissa cattle are principally kept for the manure they make, and their market value is small. There is a considerable trade carried on, in dairy districts like Shahabad, Saran and Muzaffarpur, in *ghee*, *dahi*, etc., which are manufactured in large quantities and shipped to Calcutta. In Bihar *bhusa*, oil-cake, *makai*, *janera*, and the stems of various millets and peas are given green or dried according to the season. In other parts of the province the cattle have usually to live on whatever they can pick up after the crops have been cut; the grazing grounds are often eaten down, especially in Chota Nagpur, before the hot weather has commenced. Stocks are thus subjected to considerable privations, which render them very liable to epidemic diseases.

Management and fodder.

Besides the ordinary simple ailments to which cattle are subject, a very large number die yearly of various contagious diseases, the principal of which are rinderpest, hæmorrhagic septicæmia, foot and mouth disease and black quarter. Special efforts have been made to get outbreaks of these fatal

Diseases and their treatment.

maladies reported, and in many instances people are beginning to appreciate the services rendered on their behalf and are now coming forward to give the information of their own accord. A great advance has been made in the treatment of disease among live-stock by the establishment of veterinary hospitals in charge of qualified veterinary assistants in almost every district, and by the appointment of touring assistants to attend to outbreaks and to inoculate cattle against diseases where necessary. Though there has been a large increase in the number of inoculations performed, in many districts it is still very difficult to get raiyats to take to this method of treatment, chiefly owing to caste prejudices.

Horses.

Horse-breeding, in the sense in which it is understood in Bombay and the Punjab, does not exist in this province. Efforts have been made in Saran by the Hathwa Raj and in Shahabad by the Dumraon Raj to introduce Arab stallions, but they have not been a success.

Goats.

Goats are bred everywhere in Bihar, and are procured in large numbers by dealers for the Calcutta market. The females are used for milking. At the Siripur breeding farm, the large Punjab goat called the "Jumnapari" was introduced Marked improvement resulted in the goats in the neighbourhood of the farm, and they fetch almost double the prices of the local *deshi* goats.

Poultry.

The *desi* poultry are very small as a rule but for many years English varieties have been introduced by private persons, with the result that in Bihar and Chota Nagpur the stamp has very much improved. Very good "Indian Game" cocks are to be seen in many of the villages of Chota Nagpur where they are prized for fighting purposes, and the quality of the poultry is no doubt maintained to a considerable extent in this way. The consumption of eggs and poultry has increased greatly of recent years and prices are constantly rising.

(*b*) *Fisheries.*

Administration and staff.

The Fisheries Department is still in its infancy and statistics generally have not as yet been prepared. When Bihar and Orissa formed part of the province of Bengal a Fishery Board was formed by Government in 1908; in 1910 it was attached

to the Department of Agriculture, and in 1911 a deputy director with two superintendents was appointed. This staff continued to supervise the work of fishery investigation, both for Bengal and Bihar and Orissa, until March 1921, when the Director of Industries took over charge of the fisheries in Bihar and Orissa. The fishery staff of the province at present consists only of a district fishery officer stationed at Puri.

Classes of fisheries

The fisheries fall into three natural classes: first, fresh water fisheries, which include rivers, tanks, *jheels*, canals and irrigation channels; secondly fisheries in brackish water including estuaries and lakes; and thirdly, marine fisheries. The area of potential fishery tracts of the first two classes, including river surface, tanks and *jheels* and the Chilka Lake has not as yet been estimated, but it is probably not less than eight thousand square miles.

Commonest edible fish Fresh water.

Carp are well represented, and the following species may be said to occur everywhere :—

Labeo rohita.
,, *calbasu.*
Cirrhina mrigal.
Catla buchanani.

Of the genus *Clupea*, the species *ilisha* is exceedingly common, but is not found in tanks. Like the salmon, it ascends rivers for breeding purposes when it is caught extensively, not only in the rivers but also in the estuaries. The following fish are also very common but the list is by no means exhaustive :—

Notopterus kapirat.	*Mugil cascasia.*
,, *Chitila.*	*Ophiocephalus striatus.*
Ambassis ranga.	,, *punctatus.*
,, *nama.*	,, *gachua.*
Mugil corsula.	*Anabas scandene.*

The Siluridæ are also very extensively caught.

Estuaries.

The principal estuarine fish are *Polynemus paradiseus* and *Lates calcarifer*, of which the latter is most important. Various species of shrimps, crabs and prawns are common. Oysters (*Astrea lentiginesa, Var Cuttachensis*) occur extensively in the Chilka Lake, and they are also found occasionally near the Cuttack coast, but up to the present they have not been cultured. Rays and sharks occur

extensively, but these (with the exception of two species of Trygon) properly belong to the sea.

It is obviously impossible to give anything like a satisfactory list of the principal marine forms. These may be obtained from the reports on the operations of the steam trawler *Golden Crown* in the Bay of Bengal. It is worthy of note that rays and sharks of large size are exceptionally common. The flesh is not eaten in Bihar and Orissa, and the commercial value of these species in respect of oil and manures has yet to be proved.

Marine.

Nets which are principally used in tanks, rivers, *jhcels*, estuaries, canals and channels are of various types. During the fine weather (November to March) large seine nets are used along the foreshore at Puri and elsewhere. The nets in common use are small seine nets, drag nets, gill nets and purse nets. Besides these there are various forms of complicated bamboo structures for trapping and capturing fish. Indian fishermen generally are entirely ignorant of the methods of fishcuring, and large quantities of fish are regularly lost through this cause alone, while no attntion is paid to the utilising of by-products. Moreover, the present means of conveying fish to distant markets are generally inadequate. No protective measures have as yet been adopted by Government, and the question of their institution is a large and difficult one. There is no close season for any species of fish, and the eggs of many species are destroyed yearly in inconceivable numbers. Anicuts are thrown across streams indiscriminately without the provision of fish-ladders.

Various types of nets used.

The ultimate aims of the department may briefly be summed up as follows :—

Aims of department.

(*i*) to discover the spawning grounds of the hilsa (*Clupea ilisha*) and what the conditions are (salinity, temperature, nature of the bottom, etc.), under which spawning is induced; also to ascertain the general habits of this species.

(*ii*) to fertilize artifically and hatch the agges of this species on a large scale, as is done in America, in order to extend its distribution and provide methods for meeting the increasing demands of the market.

(*iii*) to ascertain why the four principal species of crap, *viz. Laheo rohita, Laheo Calbasu, Cirrhina mrigal, Catla buchanani*, do not naturally breed in tanks, and if possible to discover what the conditions are under which spawning will take place and thus eventually to render these tanks productive;

(*iv*) to introduce gradually, where considered necessary, protective measures, such as close seasons, regulations as to sizes of the mesh in the fishing nets used and prescriptions of the kinds of instruments used in capture, prohibition of dynamiting or poisoning fish, prohibiting the capture and sale of fry, and also prohibiing the damming up of streams and channels without fish passes, etc.;

(*v*) to improve the facilities for the transit of market fish from place to place;

(*vi*) to spread information by pamphlets and actual demonstration as to methods of salting, drying and picking fish;

(*vii*) to spread information relative to the use that can be made of the livers, fins, air-bladders, etc., of certain fish.

For the present, however, financial conditions do not admit of the appointment of the requisite staff to undertake the solution of all these problems, and unless and until experts can be employed no progress can be made. Recently the Director has proposed the appointment of a superintendent with the object of undertaking the breeding of carp in the districts of Manbhum and Singhbhum, where it has been discovered that they breed naturally. At present fry for stocking tanks are obtained, so far as they are obtainable at all, from Bengal, but supplies are difficult to get and often contain predatory fish, even when collected by the Fishery Department. It is hoped that they can be bred in large quantities on a paying basis in the districts named and distributed throughout the province. The proposal has been sanctioned, but will not be brought into operation till 1923-24.

(*c*) *Forests.*

Extent of forests.

The Government forests of this province are situated mainly in Chota Nagpur and Orissa, comprising an area of 3,826 square miles, of which 3,032 square miles are under the management of the Forest Department and 794 square miles under the Civil Department

against 3,703, 2,821 and 882 square miles respectively in 1911-12. The forests in the Tributary States of Orissa and Chota Nagpur are supervised by the Agency Forest Officer under the control of the Political Agent and Commissioner, Orissa Feudatory States.

As mentioned in the report on the administration of Bihar and Orissa during 1911-12, the private forests of this province are being denuded of trees and are rapidly disappearing, with resultant erosion of the soil and floods. It is to be regretted that land owners have not yet realized the necessity of conserving their forests to the benefit of their own estates as well as to the benefit of the country. Application on behalf of estates declared to be encumbered under the Chota Nagpur Encumbered Estates Act (VI of 1876) and on behalf of others for placing their Forests under the management of Government have been encouraged, and 21 applications under section 38 of the Indian Forest Act have been received from managers of encumbered and ward estates and from private proprietors. A beginning has also been made in the selection of suitable forest areas for acquisition by Government with a view to their protection from destruction. Two areas recently acquired are the Katabil area of the Banspahar forests, covering about 3,000 acres, and the Rajadera area covering about 1,400 acres, which will be declared reserved forests. The question of acquiring the Damodar catchment area, covering about 15,000 acres is under the consideration of Government.

Denudation of private forests.

Acquisition by Government.

At present about 2·7 per cent. of the total area of this province is under the control of the Forest Department. This area is far too small to meet the demands that will inevitably be made on it in the future for the satisfaction of the needs of the people for timber, fuel and grazing, when the private forests have been destroyed.

Forest areas are classified as reserved and protected. Reserved forests are generally subject to few or no rights of user, and are managed for the production of the greatest yield of timber and fuel that is compatible with their preservation and maintenance. The area of reserved forests in 1921-22 was 1,751 square miles. The area of forests for which working plans have been prepared and are in force amounted to 1,461 square miles.

Reserved and protected forests.

Protected forests on the other hand are burdened with heavy rights of user for timber, fuel and grazing by villagers in the vicinity, the more or less unrestricted exercise of which has brought many of them to a ruinous condition. Of late years it has been realized that unless the exercise of these rights is restricted to their capacity, the forests are bound to deteriorate and eventually to disappear, and this has led to the policy of demarcating some of them and by means of a simple plan of operations arranging for the exercise of rights in a manner compatible with the preservation of the forests. The area of demarcated protected forests is now 257 miles, and of undermarcated protected forests under the control of the Forest Department 101 square miles. In addition, there are 794 square miles of undermarcated protected forests under the control of the Civil Department.

Major produce.

Of major produce the most important is *sal* timber, and the largest lessees are the Bengal Timber Trading Company who hold leases in the Singhbhum and Porahat forests and chiefly work *sal* for railway sleepers. Of minor produce the most important are *sabai* grass, *kuchila* seeds and bamboo. *Sabai* grass serves as a base for paper making and is also used for ropes and string. This grass occurs in most of the forest divisions of Bihar and Orissa, but only ranks as an important minor product in the Singhbhum district, where it is available on a commerical scale. Messrs. Balmer Lawrie & Co. hold a lease for a period of six years from the 1st December 1921 for the collection of the grass. The forests of the Puri division contain a large number of *kuchila* trees scattered throughout the protected forests. This is a valuable seed for medicinal purposes and is in great demand.

Minor produce.

Bamboos which are common in the forests in most divisions are used for building, basket-making and innumerable other purposes. A survey of the bamboo forests in the Angul division and adjoining Feudatory States was recently undertaken to ascertain the quantity of bamboos annually available for supply to a paper pulp factory if one be established at Cuttack. The result of the survey was to show that the raw material is present in abundance, and the other economic factors are now being examined.

Bamboos.

Among the subsidiary activities of the department the charcoal experiment carried out in the Sambalpur division is one of the most important. Charcoal is manufactured from the waste material obtained from branch wood from the main fellings. Work is now in full swing, and it is hoped that this venture will prove a new and remunerative source of revenue.

Charcoal.

A *casuarina* plantation has been started at Puri, the barren and dunes along the seashore being planted. The object of the plantation is threefold: first to supply the town of Puri with cheap fuel; secondly to act as a buffer against the strong sea breezes which tend to damage by sand drift the crops and houses in the interior; and thirdly, to provide reservoir sites free from contamination for the supply of water to the town of Puri. A total area of about 1,400 acres has now been planted up since 1916-17, but the fuel supplies will not be exploitable for ten years yet.

Casuarina plantations in Puri.

Government have recently had under consideration the possibility of increasing the output of lac by improving the methods of cultivation and by keeping sufficient quantities of brood lac for the propagation of the next season's crop; and a farm has been established at Kundri in the Palamau division comprising some 421 acres of open *palas* forest. The methods of propagation and collection adopted by the local cultivators are usually crude and improvident. In years when a good price is realised lac is stripped from the trees and in subsequent years there is scarcity of brood lac. The experience gained at Kundri will assist Government in investigating the possibility of the departmental propagation and the collection of lac, and will also bring home to the cultivator the advantages of improved methods based on scientific procedure. The question of bringing more areas under lac cultivation is also being considered, and an officer has been placed on special duty to investigate the general conditions of the industry. A lac association has been formed and a site at Nankum near Ranchi has been allotted to it by Government for the purpose of establishing a research institute. Work has already been started on the cultivation of *ber* and other lac-producing trees.

Lac.

The following table compares the outturn of the forests under departmental management in 1921-22 with that on 1911-12 :—

	1921-22	1911-12
Timber ...	... 2,648,000 Cft.	1,110,417 Cft.
Firewood ...	... 17,581,000 „	15,860,036 „
Bamboos—number	... 9,415,000	9,673,088
Minor produce (value)	Rs. 1,84,125	Rs. 2,79,319

Comparative statements of outturn.

Of the above, the following quantities are estimated to have been removed from the forests by free grantees free of charge and by rightholders at privileged rates :—

	1921-22.	1911-12.
Timber ...	... 578,510 Cft.	240,694 Cft.
Firewood ...	... 14,896,906 „	14,007,348 „
Bamboos—number	... 4,170,660	4,056,472
Minor produce (value)	Rs. 1,09,994	Rs. 2,14,190

Kheda operations.

The catching of wild elephants by means of *kheda* operations is under the supervision of the Deputy Commissioner, Angul. Operations were suspended from 1914-1917 but recommenced in 1917-18. The total number of elephant captured during the ten years ending 31st March 1922 is 87, including calves.

(*d*) *Mineral resources.*

Mineral wealth of the province.

The importance to India of the mineral wealth of this province may be gauged from the fact that in 1918 the vaue of its mineral production was nearly four million sterling out of a total of 15¾ million sterling for the whole of India. In 1921 the value for the whole of India was nearly 22 millions sterling, and the proportion on account of minerals from Bihar and Orissa was probably not less than in previous years. Although the smelting industries of India are still in their infancy, it may be safely prophesied that on account of its richness in coal and iron ores Bihar and Orissa is destined to be the chief smelting province of India.

Coal.

Coal-mining is by far the most important of the industries of the province. The coalfields in the Manbhum district have undergone a remarkable development in the past 20 years. Though the limits of the district include a portion of the Raniganj field, its fame as a coal

producing area rests principally upon the Jharia field. The development of the industry may be said to date from the opening of the railway from Barakar to Dhanbad and Katras in 1894 and from Kusunda to Pathardih in 1895. In 1894 the outturn of all the mines in the district was only 126,686 tons; in 1895 it rose to 1,281,294 tons, the increase being almost entirely from the Jharia field; in 1909 the output of the Jharia field alone was nearly six million tons and in 1919 it exceeded twelve millions tons. In the following year there was a decided set back, the output of the Jharia coalfield being less by nearly three million tons. In 1921 this retrogressive movement was checked, the output being 10,068,856 tons or 52 per cent. of the total production of coal in India. The rapid development of the Jharia coalfield was rendered possible by the greatly improved facilities for transport brought about by the entrance of the Bengal Nagpur Railway into the field in 1904, the doubling of the East Indian Railway line from Barakar to Dhanbad, the opening of the same railway's Grand Chord line from Dhanbad to Gomoh, and the construction of numerous sidings in the coalfields.

The Jharia field.

The increase in output from that portion of the Raniganj coalfield which is in the province has been considerable, although less marked. In 1921 it was 938,198 tons or practically double of the tonnage produced in 1911. In 1921 there were 371 collieries in the Jharia field and 110 collieries in the Raniganj field, as compared with 196 in the Jharia field and 55 in the Raniganj field in 1911.

Raniganj field.

Giridih in Hazaribagh is also the centre of a considerable coal mining industry, containing as it does mines owned and worked by the East Indian Railway Company. In 1911 the output was 700,000 tons, and in 1921, 818,580 tons. The small coalfield at Jainty in the Santal Paragans produced 8,145 tons in 1914, 154,850 tons in 1919 and 105,652 tons in 1921. Within the last decade the extension of the Bengal Nagpur Railway to the Bokaro coalfield has tapped a source of valuable fuel. The production of that area was 929,143 tons in 1921. Within the last few years there has been great prospecting activity in the Karanpura and Hutar fields, and large quantities of good coal have been proved to exist.

Other coal-fields.

The Bengal Nagpur Railway line to Bokaro is now being extended to the south-eastern portion of the south Karanpura field, and it is intended to provide railway facilities for the whole of the fields as soon as practicable. It may be expected, therefore, that the provincial output of coal will continue to increase in the coming decade. The small coalfield at Daltonganj is steadily declining in importance. The output in 1921 was no more than 36,590 tons. In the same year the production of the Rampur (Raigarh-Hingir) coalfield was 77,277 tons.

Talcher field.

Valuable coal seams have also been discovered recently in the Talcher field, and the construction of a line some 60 miles in length from a point near Cuttack westwards to the coalfield is about to be commenced. This coalfield has a particularly favourable situation and it should be able, as soon as railway facilities have been provided, to capture a large share of the Madras market.

Jharia Mines Board of Health.

In the last general review it was pointed out that the Jharia coalfield is an area which is liable to sudden and severe outbreaks of epidemic disease, and that its sanitation was a problem which had been engaging the attention of Government. In 1911 the Bengal Mining Settlements Act was passed. This was followed by the proclamation of the Jharia Mining Settlement under that Act and the appointment of the Jharia Mines Board of Health. This body employes two highly qualified medical officers and a large sanitary staff. It has brought about considerable improvement in the sanitation of the area, and its organization has been found competent to stamp out disease before it becomes epidemic. It has also been active in measures to prevent the adulteration of food. It has brought about a very marked improvement in the housing of mine workers, the old insanitary hovels having now given place to commodious dwellings conforming to simple sanitary regulations.

Jharia Water Board.

In 1915 the Jharia Water Board commenced work on a scheme for supplying pure water to the coalfield. By the construction of a dam near Topchanchi, some 15 miles from the coalfields, a reservoir has been formed. The main pipe line is now being laid and it is hoped to supply water to the coalfield by the end of the year 1924.

Within this province is situated the Bihar mica belt, the most important mica field in the world. The demand for mica for munition purposes during the war gave a great impetus to the industry, and during the quinquennial period 1914 to 1918 this field produced about 82 per cent. of the total Indian production and about 55 per cent. of the world's total production. The belt runs in an east-north-east direction through the districts of Gaya, Hazaribagh and Monghyr, and is about sixty miles in length and twelve to fourteen miles in breadth. The insistent demand during the war led to the discovery and working of small areas elsewhere in the province. The mineral occurs in the form of veins and sheets of coarse-grained pegmatite, intrusive in the old schists and gneisses. The mica belt has been worked for many years, but recent professional investigation has drawn attention to the loss caused by crude and wasteful methods of working. Of recent years some of the large deposits have been developed on systematic and scientific lines, but the trade is very largely in the hands of petty mining firms and contractors, and the loss of mica by theft is believed to be very great. The larger firms have long been urging the necessity for strict control of the trade in their own interests and that of the public, but the smaller firms are extremely apprehensive of the burden that would be cast upon them by the expensive supervising agency which a system of control would entail, and Government have so far refrained from action until some measures can be devised which will meet with the general acceptance of the trade. Another result of the manner in which the trade is carried on is that the figures of outturn are not positively reliable, though they are good enough for comparative purposes. The outpost in 1911 was given as 25,225 cwt, and that in 1918 was 45,607 cwt, but it declined to 26,058 cwt in 1921.

Mica.

The most important iron ore area in India is situated in this province in the south of the Chota Nagpur Division and in the Feudatory States of Orissa. The deposits of the ore are extensive, the quantity is believed to be enormous and the quality high, but the estimates of experts as to the quantity of iron ore in any area are very divergent and the figures of the estimated tonnage available in the province are of little value. The largest company at present at work is the Tata Iron and Steel Company, whose principal mines are

Iron ore.

situated at Gurmahisani in the Mayurbhanj State. They also hold consessions in the district of Singhbhum and the Keonjhar State. In the year 1921 this company, at their Jamshedpur works, produced 281,541 tons of pig iron, and they are also producing steel ingots and rolling rails. The first enterprise on modern lines was the Bengal Iron Company, whose works are located at Kulti, near Asansol, in Bengal. This company derives its ore for the most part from the Koina Valley and from the neighbourhood of Gua in Singhbhum. From the latter area the Indian Iron and Steel Company, whose works are situated near Asansol, in the Burdwan district of Bengal, also draw their raw material. Two other companies are in the field. The United Steel Corporation of Asia have been prospecting for some time in the south of Singhbhum and in the Keonjhar State, but so far they have not got beyond this stage. The same is true of Messrs. Villiers, who have been carrying on prospecting operations in Singhbhum and in the Keonjhar State. The production of iron ore in the province in the year 1921 was 889,465 tons.

Copper ore.

The existence of deposists of copper ore has long been known, and during the second half of the last century, several unsucessful attempts were made to test their value, particularly in Singhbhum, Hazaribagh and the Santal Paragans. The most important deposits are in Singhbhum, where in 1913 the Cape Copper Company opened a mine at Rakha which has reached a depth of over 1,100 feet. An electrical power plant, milling plant and blast furnaces were completed by 1918, and in 1919, 980 tons of refined copper were produced. The output in 1921 was 23,089 tons of ore from which 1,143 tons of copper were produced. The copper belt, which is demarcated by old workings, persists for a distance of some 80 miles. The vein varies from 3 inches to 2 feet in thickness, but the average copper contents of the ore mined is not more than about 4 per cent.

Chromite.

Chromite occurs as segregations and bands in the partially serpentinised peridotites of hills in the Kolkhan estate west of Chaibassa. These deposits have been worked for several years, and yielded, during the five years 1914-1918, an annual average output of 1,641 tons. In 1921 the output was 2,605 tons.

Manganese ores have been discovered at several localities in the province, but in only two areas has this led to any practical results, viz., in Gangpur State and in Singhbhum. Work commenced in Gangpur in 1908, and the total output up to the end of 1919 was 238,343 tons of ore containing from 45 to 50 per cent. of manganese. In 1921 the output from Gangpur was 19,823 tons and from Singhbhum 425 tons.

Manganese ores.

Deposits of the phosphate known as "apatite" occur in Dhalbhum, and in 1918 and 1919 mines were worked by the Great India Phosphates, Limited. The ore was intended for use as a fertiliser, but trials on the treatment of the crushed rock in an experimental magnetic separating plant have shown that a different type of plant is required, and work has been practically suspended for the present. 347 tons of apatite, however, were produced in 1921.

Apatite.

In Monghyr slate has been mined, chiefly by quarrying, since 1864. The stone quarried is a slightly metamorphosed phyllite, which though not giving the thinnest variety of roofing slates, produces fine slabs for which a more extensive use is continually being found. It can be used for roofing, flooring, electrical purposes, and for school slates. The output in 1921 was 2,829 tons, as compared with 1,014 tons in 1911.

Slate.

517,834 tons of building materials, including road metal, were produced in the province in the year 1921. Of this quantity 471,977 tons consisted of limestone and kunkar. An important band of limestone known as the Rohtas limestone is being worked near Dehri-on-Sone in the Shahabad district. A large cement work has been opened at Japla, East Indian Railway, to manufacture cement from this limestone and the associated shales. The bulk of the output of limestone, however, is used as a flux for iron smelting at Jamshedpur and for the maunfacture of lime.

Building metals.

The occurrences of gold in the province are confined to the southern portion of the Chota Nagpur division. Quartz veins are exceedingly numerous, and alluvial gold is consequently present in practically every stream but in no great quantity. Many old workings have been met with along the outcrops of the veins, but none of the pits

Gold.

appear to have been carried to any great depth. The most important auriferous district is Singhbhum, where a mine was worked at Kundrukocha in Dalbhum. A total amount of 6,000 ounces of gold was produced between 1915 and 1919.

Important deposits of bauxite have been found in the Palamau and Ranchi districts, and may, at some time, be used for the manufacture of aluminium. The reduction of alumina to metal, however, requires a supply of cheap electric energy, for the production of which water power, though not essential, is desirable. The utilisation of the bauxite resources may depend, therefore, upon the discovery of suitable water power in the neighbourhood.

Bauxite.

(e) *Manufactures and industries.*

The most important of the manufactures in the province are those depended on its mineral resources. The chief of these are naturally the metallurgical industries. For some years there have been in existence small iron foundries and engineering works established to meet local needs in Patna, and iron-smelting by crude methods has also been carried on at Deoghar and Godda in the Santal Parganas, the iron being used in the preparation of spades, ploughshares and other articles of domestic and agricultural use. The main development of these industries is however naturally in Chota Nagpur, where the chief company at present working is the Tata Iron and Steel Company at Jamshedpur. This company at present has plant capable of turning out 900 tons of pig-iron per diem and 17,500 tons of steel ingots per month. Apart from pig-iron the chief product is steel rails of which their average outturn is 48,500 tons per annum. They have now erected a platemill, which has just commenced operations, and their plant is being further, extended for the production of sheet bars, sheets and merchant bars. To utilise the materials produced by the company a number of subsidiary companies have been formed. These include the Calcutta Monifieth works, which produce machinery for the jute industry; Enamelled Iron Ware, Limited, for the manufacture of plates, cups, and other utensils; the Tinplate Company of India; the Agriculture Implements Company; the Indian Steel Wire Products, Limited; the Enfield Cables Company. A new iron and

Metallurgical Industries.

Iron companies.

steel company—the Iron and Steel Corporation of Asia—is contemplated, while there are two other concerns manufacturing pig-iron just across the Bengal border.

Copper.

The next important metallurgical industry is the manufacture of copper. Refined copper of 99·5 purity has been produced by the Cape Copper Company which secured its supplies from the Rakha mines and had an outturn of 1,200 tons a year. Owing largely to the closing down of mines owned by the company in South Africa, this concern is now in liquidation, though still producing copper. Other firms however are at work on the copper belt and one of these, the Cordova Copper Company, seems to have excellent prospects.

Refractory materials.

The production of refractory materials such as fire bricks, and silica bricks are necessary for the lining of the furnaces and retorts of the metallurgical industry, and as sources of supply are available in the north eastern corner of the mineral area several companies have been formed for their production. Among these may be mentioned the Kumardhubi Fire-Clay and Silica Brick Company, the Reliance Fire-Brick and Pottery Company, and the works established by Messrs. Burn and Company. Another important subsidiary industry is the production of coke in by-product ovens which is carried on by several companies in this area. Most of the sulphate of ammonia thus produced is exported from the country.

There are also other manufactures dependent on the mineral resources of the province. Originally mica was exported in the form in which it was recovered from the mines, but it has now been discovered that mica can be spilt into fine laminations and cemented together into a product called "micanite" which is being manufactured at Domchanch near Giridih. At Jhalda and Purulia in the Manbhum district there are small but thriving cutlery industries.

Other manufactures.

In Shahabad there are large limestone deposits, and recently several companies have been started near Dehri to burn lime out of the limestones found in the locality, while at Japla on the borders of Daltonganj and Shahabad a big factory has been established for the manufacture of Portland Cement. The manufacture of roofling and flooring slates as well as slates for

use in primary schools is also well established at Dharahra in Monghyr.

Important manufactures also exist in the province in connection with the agricultural products of the land. Indigo used to be manufactured to a large extent in north Bihar, but owing to the competition of synthetic indigo its manufacture—though it revived considerably owing to the war—is declining and the amount manufactured in 1921-22 (7,421 maunds) is less than half that manufactured ten years before. The place of indigo is largely being taken by sugar. For many years the manufacture of coarse sugar and gur has been in existence in the Patna and Tirhut divisions, but during the last ten years the manufacture of white sugar by up-to-date methods has been introduced. There are now nine large sugar factories with modern machinery established in north Bihar, while Government are contemplating a somewhat smaller factory in south Bihar to encourage the industry there also. During the last few years a number of small factories for hulling rice have been opened in north Bihar but these have not been uniformly successful. A large mill of the type worked in Rangoon has now been erected at Katihar in Purnea and its future will be watched with interest. Along the Ganges are also situated some thirty power mills working rotary *ghams*. They produce rape oil, most of which is exported to eastern Bengal by river, while the cake goes to the Punjab and western Bengal for use as fodder or manure.

Indigo.

Sugar.

Rice hulling.

Tobacco is grown chiefly in north Bihar. Several large factories have been established there by the Leaf Development Company for drying the leaf, while the manufacture of cheap cigarettes by the allied company called the Peninsular Tobacco Company is carried on on a very large scale with up-to-date machinery in Monghyr town. There is also a considerable manufacture of *biris*, which is chiefly centred in the same district at Jhajha.

Tobacco.

One of the most important industries in the province is the manufacture of shellac, which is made by a primitive process in numerous small factories, from the lac produced in Chota Nagpur and the southern borders of Bihar. The most important centres are

Shellac.

Baharampur and Jhalda in Manbhum, Pakaur in the Santal Parganas and Imanganj in south Gaya. Bihar and Orissa actually provides more than half the lac produced in India. Since India has a practical monopoly of this commodity, and as the total value of all forms of lac exported during the last three years has averaged 7½ crores, the importance of this industry to the province can be easily appreciated.

Saltpetre.

Bihar is the chief source of saltpetre in India, and the conditions for the natural production of the compound in the province closely approach the theoretical ideal. The density of the population combined with the large number of domestic animals produce an abundant supply of organic nitrogen to the soils around villages, and the climatic conditions of temperature and humidity are also unusually favourable. There are three kinds of saltpetre produced in Bihar: (1) crude saltpetre (*kutchia shora*) manufactured in the vicinity of villages and produced by lixiviation of nitrous earth; (2) refined saltpetre (*kalmi shora*) which is crude saltpetre refined in refineries; (3) "kotia" saltpetre which is a high refractive saltpetre produced by refiners by lixiviation of nitrous earth. Up till 1860, or a little later, India was almost the only source of saltpetre in the world, and Bihar shared fairly equally with the United Provinces and the Punjab the trade in this commodity, but the discovery of a method of marking saltpetre artifically from the nitrates of South America and the development of the German potash deposits hit the trade very hard, and whereas the exports from India in 1858-59 were over 35,00 tons, in 1913-14 they had adopted to 13,400 tons. In that year the number of licensed refiners in Bihar and Orissa was 213 and the provincial production 185,373 maunds. During the war the output was greatly stimulated, but in 1921-22 the number of licenses had again fallen to 217 and the output was only 150,000 maunds. The future of the industry is not hopeful.

Khari.

The production of *khari* which is a mixture of sodium sulphate and magnesium sulphate is also of considerable importance. The great bulk of the *khari* is produced in the district of the Tirhut division and principally in the Muzaffarpur district. The crude salts are separated from the earth by lixiviation in earthen filters, and subsequently evaporated in shallow pans by artificial heat. Crude

sodium sulphate is used chiefly for curing hides, but also for sizing coarse cloth, and as a veterinary medicine, especially for sheep. The possibility of developing this industry, so as to obtain from it the large quantity of refined sodium salts and sulphur which are required for various industries in this country, is being investigated by the Director of Industries and the Chemical Adviser. The conclusions at present arrived at seem to show that there is a good prospect of establishing a paying chemical industry by utilisation of this product.

The various manufactures connected with weaving are also of considerable importance. These are chiefly cottage industries and there are few factories. Power mills for the production of blankets exist however in the Bhagalpur central jail, while recently a demonstration blanket factory has been started in Gaya with funds supplied by the District Board. Coarse blankets and carpets are also produced in fair quantities on hand-looms in the districts of Gaya, Patna and Shahabad.

Blanket factories.

The recent census has shown that there are in the province, including the Feudatory States, 163,100 hand-looms, and it is estimated that these support no less than 500,000 persons. These looms weave cloth ranging from coarse *motia* or *garha* cloth to the fine muslins which are produced at Bihar Sharif and Cuttack, and the artistic fabrics of Sambalpur. The average net imports of yarn for the use of hand-loom weavers have been 22 million lbs. per annum, sufficient to weave approximately a hundred million yards of cloth worth over five crores of rupees. For the development of this industry the Department of Industries is engaged in the introduction of labour saving appliances—the chief of which is the flyshuttle loom—by means of demonstration parties, and has established a cotton experimental and testing station at Ranchi. At this station experiments are carried out in various weaving appliances, in testing yarn, and in training mistries in handling modern implements.

The importance of hand-looms: the cotton weaving industry.

This province is also the home of the tasar silk worm, and in no province in India is this variety of silk produced in such large quantities as here. The chief centres are the Chota Nagpur division, the Santal Parganas and Orissa. There is also a large export trade in tasar

Tasar silk industry.

cocoons and in 1921-22 7,000 maunds of tasar cocoons were exported. Tasar is a wild silk insect and has never been successfully domesticated. It lives in forest areas chiefly and feeds on a variety of tasar trees chiefly *asan* and *arjan*. Most of the cocoons that come to the market are of semi-domesticated stock. Chaibasa is a big market for tasar cocoons. The weaver both reels the cocoons and weaves the cloth. There is a fairly large demand for tasar cloth and an equally large output of cocoons, but the production of silk thread is restricted, and unless improvements both in respect of quality and quantity are effected in the process of reeling, no material development of this industry can be expected. The local Government have recently started a silk institute at Bhagalpur for the development of this local industry and also in order to introduce mulberry and eri silk cultivation in the province.

Other local industries.

There are many other local industries of considerable importance, but it is only possible here to mention some. Tanning is carried out in two medium sized tanneries at Cuttack, while a large modern tannery has been erected at Motihari for the production of chrome leather of superior type. The silver-filigree work of Cuttack and the silver work of Kharagpur are also well established. The manufacture of brass and bellmetal utensil is carried out in Balasore, Purnea, Saran and Patna. Stoneware, padlocks, and metal ware are made at Gaya, while in Shahabad there is an interesting pottery industry which consists in covering earthen pots of various shape with lacquer, sometimes in black and silver, and sometimes in various colour and considerable diversity of design.

CHAPTER III.

Historical Summary of the Civil Administration of Bihar and Orissa.

So far as its civil administration is concerned, Bihar and Orissa has no independent history prior to the 1st April, 1912. With the exception of the district of Sambalpur, transferred from the Central Provinces at the time of the original partition of Bengal in the year 1905, the territory which now constitutes this province was administered along with the province of Bengal till the 16th October 1905 and with West Bengal only till the 31st March 1912, when it was constituted a separate province in accordance with the announcement made by His Majesty the King-Emperor at the Coronation Darbar. A description therefore of the civil administration of the province must largely be concerned with the administrative history of the combined provinces of Bengal, Bihar and Orissa.

Connection with Bengal.

The first connection of the British with the province was, as elsewhere in India, due to trade. The first English settlement was established in Orissa in 1633, and the first factory was started at Singhia near Lalganj in Bihar in 1678. These settlements were however purely for the purposes of trade, and the history of British administration in the province may be said to date from the battle of Plassey in 1757.

Early trade settlements.

After this battle the British settlement at Fort William began to assume a territorial character. In 1761 by the treaty concluded with the Nawab Mir Kasim Ali, it was agreed *inter alia* that the latter should succeed as Nawab of the subahdari of Bengal, Bihar and Orissa, and that the British army should be ready to assist him in the management of affairs. The seige of Patna took place in 1763, followed in 1764 by the decisive battle of Buxar, which made the British undisputed masters of the provinces of Bengal and Bihar. This was recognised in 1765 by the grant of the Dewani of Bengal,

Grant of the Dewani.

Bihar and Orissa* in perpetuity to the East India Company by the Emperor Shah Alam. From this date Bihar and Orissa may be said to have passed under British administration. The Dewani included the administration of civil justice as well as the collection of revenue, and constituted the British as the virtual rulers of the provinces. The Nawab of Murshidabad recognised this grant in the same year, and consented to accept a fixed stipend for the maintenance of himself and his household.

The Company stands forth as Dewan.

But though the civil and military power of the country and the resources for maintaining it were now in the hands of the East India Company, the management of its revenue was at first left in the hands of Indians. Subsequent enquiries however, which were carried out by European supervisors, showed that the internal Government was in a state of profound disorder and that the people were being much oppressed. Seven years therefore after the acquisition of the Dewani, in 1772, the Court of Directors resolved to "stand forth as Dewan, and by the agency of the Company's servants to take upon themselves the entire care and management of the revenue."

Mr. Hastings' system of Government, 1772.

This included the administration of justice, and the institutions then adopted were as follows. In the Revenue Department a Board of Revenue was established which sat at Calcutta, and in the provinces, for the superintendence of the revenues, European collectors were appointed each of whom was assisted by an Indian officer styled dewan, while with respect to the revenue a settlement for five years was adopted. In the Judicial Department, two courts were instituted for each provincial division or collectorship, one by the name of dewani or civil court, for the cognizance of civil causes; the other named faujdari or criminal court, for the trial of crimes and misdemeanours. The Collector presided over the civil court, attended by the provincial dewan and other officers. In the criminal court the kazi and mufti of the district, and two maulavis† sat to expound the Muhammadan

* Orissa, as ceded, then included only the district of Midnapore and a part of Hooghly or, more accurately, the tract of country lying between the rivers Subarnarekha and Rupnarain. Orissa, as we now understand the name, was conquered and annexed from the Marathas by Lord Wellesley in 1803.

† The kazi is a Muhammadan judge; the mufti is the expounder of the sentence of the court, while the maulavi is the interpreter of Muhammadan law.

law, and to determine how far delinquents were gulity of its violation; but it was the Collector's duty to attend to the proceedings of this court so far as to see that all necessary witnesses were summoned and examined, and that the decision passed was fair and impartial. The Collector had no further concern in criminal administration. Appeals from these courts were allowed to two superior tribunals established at the chief seat of Government at Calcutta, one of which was called Dewani Sadar Adalat or Chief Court of Civil Judicature; the other, Nizamat Sadar Adalat, or Chief Court of Criminal Justice.

This system however did not achieve any great success and there were frequent defaults in the payment of land revenue. As a result of this lack of success it was decided to alter the system and in 1774 the European Collectors were recalled, and local officials, styled amils, were appointed in their stead. The superintendence of the collection of the revenue, removed from the Collectors, was vested in six Provincial Councils, one of which was established at Patna. The administration of civil justice was, on the same principle, transferred to the amils, while the control of the police which had been entrusted to the Collectors was vested in native officers called faujdars.

Revised in 1774.

Vital changes were, however, speedily effected in these arrangements. The constitution of the Dewani Adalat was transformed by the establishment in 1780, in each of the six great provincial divisions, of a court of justice distinct from, and independent of, the Revenue Council. Over this court a covenanted servant presided, whose jurisdiction extended to all civil and rent cases. These six divisions were, in their civil aspect, augmented shortly to eighteen, as their jurisdiction was found to be too extensive. The judges of these courts were wholly unconnected with the Revenue Department, except in the four frontier districts of Chatra (or Hazaribagh), Bhagalpur, Islamabad (or Chittagong) and Rangpur, where, for local reasons, the offices of judge, magistrate and collector were vested in the same person, but with a provision that the judicial authority should be considered distinct from, and independent of, revenue functions. Simultaneously

Provincial Civil Judges established independent of Revenue Courts, 1780.

with the extension of the civil courts the Provincial Councils were abolished, and all the revenue affairs of the provinces were brought down gradually to the Presidency, there to be administered by five of the most able and experienced Civil Servants, under the designation of a "Committee of Revenue". One President of each Provincial Council was, however, to remain officiating as Collector under the Committee of Revenue until further orders, as likewise were the four officers, who had been separately appointed for the four frontier districts, who performed duties roughly corresponding to those of civil judge, magistrate and collector.

Provincial Revenue Councils abolished; Collectorships reinstituted, 1781.

The establishment of faujdars and thanadars, introduced in 1774, was also abolished in 1781, and the eighteen Civil Judges "were invested with the power, as magistrates, of apprehending dacoits and persons charged with commission of any crime or acts of violence within their respective jurisdictions." They were not, however, to try or punish such persons, but "were to send them immediately to the daroga of the nearest faujdari court, with a charge in writing setting forth the grounds on which they had been apprehended. They had merely powers to act as an executive police, leaving the trial and the infliction of punishment to the local Muhammadan officials. Provision was at the same time made for cases where, by special permission of the Governor General in Council, "certain zamindars might be invested with such part of the police jurisdiction as they formerly exercised under ancient Mughal Government". In such cases the European judge, in his capacity of magistrate, the daroga of the criminal court and the zamindar, were to exercise a concurrent authority for the prevention of crime.

Civil Judges vested with executive magisterial powers, 1781.

Under the instructions which Lord Cornwallis brought with him in 1786, the revenue and judicial institutions of the country were again modified. The designation of the Committee of Revenue was changed to Board of Revenue. Its authority and functions were continued. The European civil servants superintending the several districts, into which the country was divided,

Union of the offices of Collector, Civil Judge and Magistrate, 1876.

were each of them vested with the united powers of collector, civil judge and magistrate. In proposing this union of different authorities in the same person, the Court of Directors were influenced by the consideration of its having "a tendency to simplicity, energy, justice and economy". They placed on record that they were actuated by the necessity of accommodating "their views and interests to the subsisting manners and usages of the people, rather than by any abstract theories drawn from other countries, or applicable to a different state of things". It was only in the administration of justice in the towns of Patna, Murshidabad and Dacca that district courts presided over by a judicial officer were established.

Criminal administration assumed by the British.

The administration of criminal justice remained, however, vested in the Naib Nazim, or deputy of the Nawab, to whose courts, which were superintended by Muhammadan law officers, almost all criminals apprehended by the magistrate were referred for trial. The Collector, in his capacity of magistrate, could only decide upon the most petty charges. But towards the end of 1790 a very important change took place in this arrangement. It was declared that, with a view "to ensure a prompt and impartial administration of the criminal law, and in order that all ranks of people might enjoy security of person and property, the Governor-General in Council has resolved to accept the superintendence of the administration of criminal justice throughout the provinces". In conformity with this resolution the Nizamat Adalat, or chief criminal court of justice, was removed from Murshidabad to Calcutta, to consist of the Governor-General and members of the Supreme Council, assisted by the head Indian law officers. Four courts of circuit, superintended respectively, by covenanted servants of the Company, each with their Muhammadan law officers, were established in 1793 for the trial of cases not punishable by the magistrates.

Collectors' duties separated from those of Magistrate and Civil Judge.

Lord Cornwallis, moreover, differing from the Court of Directors, and deeming it incompatible with the principles of his system that revenue officers should decide on suits, the cause of which, originating in their own department, might render them not wholly disinterested in the decision, annulled (1793) the judicial

power of all revenue officers, and transferred the cognizance of all matters wherein the Government might be concerned, to the courts of Dewani Adalat. A new court of civil judicature was established in every district. The new judge was a European covenanted servant, of higher official rank than the collector, uniting in his person the powers of magistrate as well as of civil judge, and controlling the police within the limits of his division. This arrangement continued, for about forty years, one officer in each district being judge and magistrate, and another collector.

Indian Civil Judges, Munsifs, 1793.

At the same time a resolution was enacted authorising the appointment of "native commissioners" to hear and decide, in the first instance, on suits of personal property not exceeding the value of 50 rupees. These were of three descriptions, *viz.*, *amins*, or referees; *salisan*, or arbitrators; and *munsifs*, or native justices. The referees and arbitrators were usually kazis appointed by virtue of their offices; the munsifs were more carefully selected. They were paid not by fixed salaries, but by a commission on the amount of cases investigated by them. Appeals from their decision lay to the civil judge.

Four Provincial Courts of Circuit and Appeal.

In order to ensure the hearing of appeals from the judge, which had previously lain direct to the Governor-General at Calcutta, Lord Cornwallis established, by Regulation V of 1793, four provincial Courts of Appeal, one of which was to be in the city of Patna, each court being superintended by three covenanted civilian judges. To these courts a register and one or more covenanted assistants were attached. An appeal lay from them to the Sadar Dewani Adalat, or Governor-General and Council in Calcutta, when the suit exceeded Rs. 5,000 in extent. These civil courts were identical with the courts of circuit mentioned above, which were simultaneously appointed. The same officers, European and Indian, were attached to the courts alike in their civil and criminal jurisdictions.

The area comprising this province was then divided as follows:—

(1) The Patna Division—

Patna, Ramghur, and the zillas of Bihar proper, Tirhut, Saran, and Shahabad.

(2) Murshidabad Division—

which included Purnea and Bhagalpur.

(3) Calcutta Division—

including what was then Orissa and a portion of Manbhum, belonging to what were then known as the Jungle Mahals.

Changes in the constitution of the Sadar Court.

The Governor-General and Council, who were at this period discharging the duties of both the Sadar Dewani and Sadar Nizamat Adalat, soon found that more of their time was occupied in these functions than could conveniently be spared. Lord Wellesley, moreover, placed it on record that he deemed "it essential to the impartial, prompt and efficient administration of justice, and to the permanent security of the persons and properties of the native inhabitants of these provinces, that the Governor-General in Council, exercising the supreme legislative and executive authority of the State, should administer judicial functions of Government by the means of courts of justice distinct from the legislative and executive authority". It was accordingly determined that the Government should relinquish the chief civil and criminal jurisdiction, and place it in the hands of a court of justice over which were to preside three judges, the Chief Judge being a member of the Supreme Council and the other two selected members of the covenanted Civil Service. This Sadar Court remained the court of final appeal in the Presidency without any radical modifications until it was united with the Supreme Court in 1862, and both together were amalgamated into the present High Court. The Sadar Court was latterly composed of five or six covenanted civilians, more or less, as might be necessary.

The Supreme Court, 1774.

The Supreme Court, which was an entirely separate institution, was governed by English Law and administered by three Judges, barristers-at-law, appointed by the Crown, of whom the chief was styled Chief Justice. The Supreme Court was established by letters patent, which the King was empowered in the Regulating Act to grant, and which were dated the 26th March 1774. It had full local jurisdiction in Calcutta, and also personal jurisdiction over all persons in the full employment of

the Company, including zamindars, revenue farmers and contractors in the mufassal. This extensive power led to confusion and injustice, and a new Act was passed in 1781, defining and limiting the powers of the Crown Court. In general terms it may be said that, till its abolition, the jurisdiction of the Supreme Court was confined to the limits of the city of Calcutta, between the Hooghly and the Mahratta Ditch, and to the determination of all serious criminal cases in which European British subjects were accused and committed for trial. It was strictly interdicted by law from interfering in matters of revenue.

Board of Commissioners in Bihar and Benares.

With the acquisition by cession or conquest, between 1795 and 1805, of large areas of additional territory the Board of Revenue at Calcutta found itself unable to manage efficiently the revenue administration of all British territories, and various Boards of Commissioners were appointed. In 1816 a separate Commissioner was appointed for the superintendence of the revenues of the province of Benares, and that part of the province of Bihar which was comprised in the zillas of Bihar, Shahabad, Saran and Tirhut. He was vested with all the authority that had previously been exercised in this province by the Board of Revenue, and in addition was authorised to superintend the settlements and the general work of Collectors in the newly acquired provinces. In 1817 the authority of the Bihar-Benares Commissioner was extended to the districts of Ramghar, Bhagalpur and Purnea. In the same year it was found advisable to appoint two Commissioners in place of the single officer, and "the Board of Commissioners in Bihar and Benares" was accordingly established.

Board of Revenue for the Lower Provinces, 1822.

In 1822 considerable changes were effected in these arrangements; (1) the duties, powers and authority of the Board of Commissioners in Bihar and Benares within the districts of Bhagalpur and Purnea were vested again in the Calcutta Board of Revenue, which continued to exercise its powers in the districts subordinate to its authority, and was called Board of Revenue for the Lower Provinces; (2) the duties, powers and authority exercised by the Board of Commissioners in the Ceded and Conquered Provinces within the southern and

northern divisions of Bundalkand and the districts of Allahabad and Cawnpore, were vested in the Board of Commissioners in Bihar and Benares, which continued in like manner to exercise its power in the districts hitherto subordinate to its authority, with the exceptions just named, and was called the Board of Revenue for the Central Provinces; and (3) the several districts of the Ceded and Conquered Provinces, with the exception of the districts above specified, were to continue subordinate to the Board of Commissioners, which was to be called the Board of Revenue for the Western Provinces.

Board of Revenue for the Central Provinces.

Board of Revenue for the Western Provinces.

In 1810 superintendents of police were appointed in Patna, Benares, and Bareilly who were in entire charge of the police in those districts and were not subordinate either to the Boards of Commissioners or to the subsequently formed Boards of Revenue.

Superintendents of Police.

The system introduced by Cornwallis and Barlow which has been outlined above lasted during successive administrations, with only the necessary modifications engrafted on it by time and circumstances; but under Lord William Bentinck extensive changes were again effected. By Regulation I of 1829 the executive officers of both police and revenue were placed under the superintendence of Commissioners of Revenue and Circuit, each of whom was vested with the charge of four or five districts. Lord William Bentinck abolished the Provincial Courts, stigmatizing them " as resting places for those members of the service who were deemed unfit for higher responsibilities ". The Commissioners were appointed to go on circuit as Sessions Judges. The appointment of superintendents of police was abolished and complete control of the police was vested in the Commissioner. The Revenue Boards in the Provinces were also abolished, and their powers vested in the Commissioners under the control of the Sadar Board at Calcutta. The Commissioners were absolutely to superintend both the finance and the criminal justice of the different divisions. Four Commissioners were appointed for the

Provincial Courts abolished, 1829, Commissioners of Revenue and Circuit; their powers—judicial, revenue and police.

districts now contained in this province, one for Saran, Shahabad and Tirhut, one for Patna, Bihar and Ramgarh, one for Bhagalpur, Monghyr and Purnea, and one for Cuttack, Khurda and Balasore. Of these the last two had also jurisdiction over some districts now included in Bengal.

Civil Judges vested with Sessions powers 1831-35.

These arrangements were not, however, found completely successful, and after a very few years the Governor-General exercised his right of transferring the judicial powers of the Commissioners to Civil Judges. It was declared (Regulation VII of 1831) competent to Government to invest Civil Judges with full powers to conduct the duties of the sessions, and by Act III of 1835 the Government was authorised "to transfer any part or the whole of the duties connected with criminal justice from any Commissioners of Circuit to any Sessions Judges, and to define the powers which shall be exercised by each respectively". Commissioners, however, still continued to hold judicial powers, and were occasionally so employed. But Regulation VII of 1831 and Act III of 1835 were both repealed by Act VIII of 1869, and under the present law Commissioners have no such powers (except in the Scheduled Districts) as all Sessions Judges and officers invested with powers of Sessions Judges are appointed under the rules of the Code of Criminal Procedure.

Civil Judges divested of Magisterial powers. Union of Magistrate and Collector.

The judges under Lord William Bentinck's arrangement held a jail delivery every month. But the judges were also the magistrates, and as such it became evident that they were unable to cope with their additional duties. It was considered (1831) necessary to divest them of their magisterial responsibilities, and these were accordingly transferred to the Collector. This was the creation of the present unit of the administration, the Magistrate and Collector, or executive head, of each district. In 1837 however the offices were again separated, and the process of separation went on gradually until 1845. In that year the magisterial and fiscal duties were disunited everywhere except in three districts of Orissa, and in certain independent Joint Magistracies.

Meanwhile the large increase which was occurring in the administration of civil and criminal justice as well as in revenue administration necessitated certain increases and alterations in the staff.

Indian Civil Judges.

In 1831 Lord William Bentinck established a higher grade of judgeships for Indians. Previously there had been in fact but two classes of Indian judges, with very limited powers and small salaries. The higher class was known as "sadar amins", the lower as "munsifs". The munsifs had been appointed by Lord Cornwallis to relieve the pressure on the European judges. In 1803 the office of sadar amin was instituted, with jurisdiction extending to suits of Rs. 100. In 1821, after some intermediate enlargement of the powers of both classes, the munsifs had been empowered to try cases extending to Rs. 150, whilst the sadar amins took cognizance of cases to the amount of Rs. 500. In 1827 the authority of the latter class of officers had been doubled. Lord William Bentinck now established a superior class of judicial officers known as principal sadar amins with enlarged powers and higher salaries. They were subsequently authorized to try cases involving property to any amount, and an appeal lay from them to the European judges. The subsequent history of these judicial officers may conveniently be considered here. The Small Cause Courts in Bengal were established by Sir John Peter Grant under Act XLII of 1860. In 1867 the judges of the Small Cause Courts and the principal sadar amins have since been called subordinate judges, and are eligible alike for Small Cause Court work or for that of the ordinary Civil Courts.

In 1833 the appointment of additional judges to perform any of the duties of the District Judges, to which they might be appointed, was sanctioned.

The office of uncovenanted Deputy Collector was established under Regulation IX of 1833. The appointment was, in the first instance, open only to "natives of India of any class or religious persuasions", but was extended by Act X of 1843 to all persons of whatever religion, place of birth, descent or colour.

The machinery of the revenue administration and civil justice having been strengthened, the expediency of a more extensive criminal branch of the Judicial Department forced itself into notice. But it was not till 1843 that an Act was framed by the Legislative Council, empowering

Establishment of the Subordinate Executive Service, 1843.

the Government to appoint in any district one or more uncovenanted Deputy Magistrates, with or without police power, as might be determined.

At this point may be noticed the creation of the Lieutenant-Governorship of the Lower Provinces of Bengal, Bihar and Orissa.

Bengal becomes a Lieutenant-Governorship.

In 1854 the Government of the three provinces was entrusted to a Lieutenant-Governor, and the personal connection with the Government of India, which had resulted from the union of the offices of Governor-General of India and Governor of Bengal, Bihar and Orissa ceased to exist. Henceforth the Government of India became entirely distinct from that of the Lower Provinces.

In 1859 the offices of Magistrate and Collector were again united. This reunion had been the subject of anxious deliberation in India for six years before it was finally resolved upon. The measure was strongly advocated by Sir Frederick Halliday, the Lieutenant-Governor, by Lord Dalhousie, and by Lord Canning, and as strongly opposed by Sir John Peter Grant. It was sanctioned by Lord Stanley, who was then Secretary of State for India, in his Despatch No. 15, dated 14th April 1859. He directed "that the offices of Magistrate and Collector, where now disunited in Bengal, should be combined in the same person, and that such of the covenanted officers as are now Magistrates, and are not absorbed in the higher office, should be employed as Joint Magistrates and Deputy Collectors, but without any decrease of salary; and that the Joint Magistrate in each district should ordinarily have the superintendence of the police under the general control of the Magistrate". These orders were rapidly carried out in all districts where the appointments were separate.

Reunion of Magistrates and Collectors, 1859.

At the same time the independent Joint-Magistracies already alluded to were done away with. At first these were offshoots from large districts, and were created in the early part of the last century, as quasi subdivisions to stem the tide of crime and dacoity in localities remote from the headquarters stations. They now became full district charges. The Joint Magistrate of these subdivisions, from exercising a joint jurisidiction with the Magistrate of the district, had gradually come to exercise independent criminal powers, but in revenue matters they never were

The Independent Joint Magistrates abolished.

invested with more than the powers of a Deputy Collector, and the land revenue always continued to be paid at the headquarters treasury.

The present grade of Joint-Magistrate.

The present Joint-Magistrates were created by Lord William Bentinck, in order to afford more efficient aid to the Magistrate-Collectors than could be given to them by Assistants vested only with the powers of an Assistant under the Regulations.

The Bengal Police Act, 1861.

In 1861, shortly after the duties of Collector and Magistrate were combined, the police was established as a separate department under the Magistrate; and district superintendents and assistant superintendents of police were appointed to discipline the force. An Inspector-General and Deputy Inspectors-General were placed at the head of the police to supervise and inspect the department.

The High Court established 1862.

On the 14th May 1862 the High Court of Judicature in Bengal was established by letters patent. The Sadar and Supreme Courts, to which reference has already been made, were abolished and their combined powers and jurisdiction were vested in the High Court. Fresh letters patent were issued in 1866, and further provision was made respecting the jurisdiction of the court.

Administrative divisions in 1870.

It is convenient here to show the administrative divisions and districts of the area now included in this province as they existed in 1870. There were four divisions each under the control of a Commissioner; (*i*) Bhagalpur, which included the Regulation districts of Bhagalpur, Monghyr, and Purnea, and the non-Regulation district of the Santal Parganas; (*ii*) Patna, which included the Regulation districts of Patna, Gaya, Champaran, Saran, Shahabad and Tirhut; (*iii*) Orissa—which included the Regulation districts of Cuttack, Puri and Balasore; the Commissioner of this division was also Superintendent of the Tributary Mahals of Orissa and had powers of a Sessions Judge in Balasore; and (*iv*) Chota Nagpur—which consisted of the non-Regulation districts of Hazaribagh, Lohardaga, Manbhum and Singhbhum. The Commissioner of this division had powers of

a Sessions Judge throughout the division, and the Deputy Commissioners who were in charge of the various districts had power to try all offences not punishable with death and to pass sentences of imprisonment not exceeding seven years. In all regulation districts there were Sessions Judges, except in Puri and Balasore which were subordinate to the Sessions Judge of Cuttack, in Monghyr which was subordinate to the Sessions Judge of Bhagalpur, and in Champaran which was subordinate to the Sessions Judge of Saran.

Patna Division.

The history of the administration of non-Regulation districts will be considered later, but it will be convenient here to note division by division the main alterations that have taken place in the administration of Regulation districts. In the Bhagalpur Division the only important alteration has been the establishment of a separate Sessions Judge for Monghyr in 1913. In the Patna Division, the Tirhut district was divided into the two districts of Muzaffarpur and Darbhanga in 1875, and in 1906 a separate Judgeship was created for Darbhanga. Champaran, which had originally been under the jurisdiction of the Sessions Judge of Saran, was placed under the judge of Muzaffarpur in the same year. Meanwhile as the duties of the Commissioner of Patna had been found to be unduly heavy, an Additional Commissioner had been appointed for the division for varying periods in almost every year since 1883. In 1897 the Secretary of State sanctioned tha appointment for three years of an Additional Commissioner to be at the disposal of the Local Government for Patna or for any other division where his services might be required. Eventually, after renewal of this sanction for further periods, in 1908, the Secretary of State sanctioned the proposal to divide the Patna Commissionership into two charges, the Tirhut Division with headquarters at Muzaffarpur comprising the districts of Muzaffarpur Darbhanga and Champaran and Saran, and the Patna division which was to consist of the districts of Patna, Gaya and Shahabad. In the Orissa Division the only important change was the inclusion, in 1905, of the district of Sambalpur, which had till then formed part of the Central Provinces. This district together with Manbhum and Singhbhum was in 1909 formed into a separate Sessions charge.

Formation of Tirhut Division.

From 1870 up till the separation of the province from West Bengal in 1912 the system of administration remained practically the same. The District Magistrate and Collector was responsible for the peace and order, for the ordinary magisterial functions, and for the revenue administration of the district. This work was supervised by the Commissioner of the Division, who was subordinate in revenue matters to the Board of Revenue at Calcutta. The Magistrate and Collector was assisted by Joint Magistrates and Assistant Magistrates belonging to the Indian Civil Service, by Subdivisional Officers who might either be members of the Indian Civil Service, or of the Provincial Civil Service, and by Deputy and Sub-Deputy Collectors belonging to the Provincial and Subordinate Civil Services. Civil justice and the criminal sessions were in charge of the District and Sessions Judge, who was subordinate to the High Court at Calcutta and was assisted by Subordinate Judges and Munsifs.

System of administration, 1870—1912.

The chief alteration that was made was in the formation of various new departments of Government. The Customs became an imperial department with its own cadre of officers; a Commissionership of Excise and Salt was established in 1889; the office of Director of Land Records and Agriculture in 1884; and that of Registrar of Co-operative Societies in 1904. In 1905 the Department of Agriculture was separated from that of Land Records and given a separate Director of his own. Among other important departments that had been formed by 1911-12 may be mentioned the Veterinary Department, and the departments in charge of the Inspector-Generals of Registration, Police, Jails, Civil Hospitals and of the Director of Education and the Sanitary Commissioner. The most important administrative reform that was made occurred in 1910-11. The spread of education and the consequent growth of public opinion combined with the enlargement of the Provincial Legislative Council had so increased the duties and responsibilities of the Lieutenant-Governor that it was difficult for him to cope with them unaided. With the object therefore of lightening his labours as well as of ensuring continuity of policy, without at the same time impairing the prompt exercise of his executive power, an Executive Council of three members was appointed to collaborate with him. The Lieutenant-Governor was

Formation of Executive Council.

vested with the powers enjoyed by the Governor-General to overrule the Executive Council in cases affecting the public interest and welfare, while it was left open to him to reserve, with the previous sanction of the Governor-General in Council, any specific function of the Local Government to himself. Consequent on the formation of an Executive Council, it was proposed that the functions exercised by the Board of Revenue should be distributed between the Executive Council and Commissioners, and when this province was created it was intended that the Board of Revenue which was constituted pending the legislation necessary, prior to the appointment of an Executive Council, should eventually be merged into the Executive Council. This idea was subsequently abandoned, but when the Executive Council was constituted on August 1st 1912, the number of members of the Board of Revenue was reduced to one.

The summary of administrative history so far given has referred mainly to the Regulation districts, but it is necessary also to describe the administrative history of the Scheduled districts, which were referred to in the last chapter, and of the Feudatory States of Orissa.

Chota Nagpur.

In the time of the Emperor Akbar, Kokrah or Jharkhand, as Chota Nagpur was then called, formed part of the subah of Bihar, and when in 1765 the Dewani of Bengal, Bihar and Orissa was granted by Shah Alam to the East India Company, Chota Nagpur came under British influence as an integral part of Bihar, though this remote part of the dewani was at first naturally little affected by the transfer. In 1772 the first entry of the British into Chota Nagpur appears to have taken place, when a British force marched into Palamau to reinstate a local Raja. About the year 1770 the then Maharaja of Chota Nagpur was granted his first patta or sanad, but the internal administration was left entirely in his hands. Chota Nagpur was then rather in the position of a tributary State than under the direct administration of the East India Company.

Early history.

The Ramgarh district.

In 1780 a district was established under the name of the Ramgarh Hill Tract, with its headquarters alternately at Sherghati and Chatra. It comprised the present districts of Hazaribagh, Palamau and parts of what are now Gaya, Manbhum and Monghyr. The remainder of what is now Chota Nagpur was

directly administered by its own tributary Chief. Until 1793 appeals lay direct from the Ramgarh Court to the Governor-General in Calcutta, but in that year it was placed under the jurisdiction of the provincial Court of Appeal of the city of Patna. In 1817, in consequence of the discontent amongst the aboriginal tribes, as evinced by the rising of 1811 and prior petty outbreaks, the country of the Mundas and Oraons was brought under the direct administration of the East India Company as part of the Ramgarh District. In 1832 the grievances of the aboriginals culminated in a general Kol rising which resulted in a complete change in the administrative system.

South-west Frontier Agency, 1833.

The most important result of the insurrection was that a regulation (Regulation XIII of 1833) was passed which constituted an Agency to be known as the South-west Frontier Agency. The Agency consisted of Chota Nagpur (the present district of Ranchi and pargana Tori), Palamau, Kharakdiha, Ramgarh, Kunder, the Jungle Mahals (except Bishanpur, Sanipahari, and Sherghar) and pargana Dhalbhum which was then included in district Midnapur. Those parts of the old Ramgarh district which were not included in the Agency were transferred either to (the district then called) Bihar or Bhagalpur. Within the territory so constituted the operation of the Regulations and of the rules for the administration of civil and criminal justice and the collection of revenues were suspended, and authority in these and all other matters vested in an officer denominated Agent to the Governor-General. This Agent was vested with the same powers as were exercised by Commissioners of Revenue and Civil and Sessions Judges. The whole Agency was subdivided by the Agent into three parts which were demarcated as the Manbhum, Lohardaga, and Hazaribagh divisions, and subsequently, on the conquest of the Kolhan in 1837, a fourth division known as the Singhbhum division was established. In 1843 the Agent was relieved of his powers of a Civil and Sessions Judge, and an officer was appointed to perform these duties under the title of Deputy Commissioner, which was changed to Judicial Commissioner, in 1861. In 1854 by Regulation XX of that year Chota Nagpur was transferred to the administrative control of the Lieutenant-Governor of the Lower Provinces. The designation of the officer in charge was changed from Agent to Commissioner, and that of the territory from South-west Frontier Agency to the Chota Nagpur division or Commissionership.

In 1833, a few short rules were issued by Government for the guidance of the Agent, which directed that, pending the issue of detailed instructions, the Agent and officers subordinate to him were to be guided by the "rules heretofore in force for the conduct of all local duties". These criminal rules continued in force till they were superseded by the Criminal Procedure Code (Act XXV of 1861), which was extended to the districts of Chota Nagpur when first passed. It was subsequently held, in 1864, that the Code was extended to so much only of the Singhbhum district as is comprised in Dhalbhum and the Kolhan. The present Code (Act V of 1898) is in force throughout the division. As regards the administration of civil justice, a set of rules was proposed by the Agent at the same time that criminal rules were laid before Government, but orders on them were suspended pending the promulgation of a bill on the subject then under preparation. This bill was never passed, and till Act VIII of 1859 was extended to the division, there was no specific law or rule to guide the procedure of the Civil Courts which followed the regulations, except in those points, where some order of the Agent interposed.

Rules for civil and criminal justice.

Under Regulation XIII of 1833 the operation of the Regulations had been suspended. But this order only extended so as to prevent rules and regulations passed prior to its coming into force having effect. Regulation XIII was never repealed, but it did not follow that each and every Regulation which was enacted subsequently was not in force. In 1877-78 an exhaustive enquiry was made to find out what Acts and Regulations were in force, and in 1881 a notification was passed declaring the enactments in force in and to be extended to the districts of the division. By this notification the administration of the district was definitely assimilated to the administration of the Regulation Districts. Though the districts of the division are still classed as non-Regulation and are "backward areas" under the Reforms Scheme, and though there are still a few special laws, notably the rent law, in force, the general administration is to all intents and purposes carried on on the same lines and on the same principles as in the Regulation Districts.

The effect of deregulationization in the division.

From the first creation of the Agency, the ordinary laws for the sale of land for debt or arrears of rent were regarded as inapplicable to the area, and rules provided that no sale or alienation, or even mortgage of hereditary or movable property, was to take place without the sanction of the Agent. For many years this rule was always acted on as regards sales, and formed one of the most peculiar features of the Agency. And in extending the old Civil Procedure Code to the districts of Hazaribagh, Lohardaga and Manbhum, a proviso to this effect was added to the notification. That Code was not extended to Singhbhum, but was considered in force in the Dhalbhum portion of that district. The new Code of Civil Procedure (Act V of 1908) is now in force throughout the division except in the Kolhan subdivision.

Special laws as to sales of land.

The chronic discontent amongst the aboriginals again manifested itself, in what is generally known as the Birsa rising of 1899-1900 and in 1901, as a radical remedy, it was decided to effect a survey and settlement of the Munda country. In 1902 these operations commenced. The knowledge thus gained of local conditions has been embodied in the amended Chota Nagpur Tenancy Act (VI of 1908) which was extended to Manbhum in 1909, and there is now one uniform law throughout the division, governing the relations of landlord and tenant.

Chota Nagpur Tenancy Act.

The district of Lohardaga (the name of which was changed to Ranchi in 1899) had long been found too unwieldy for effective administration, and the distance of the courts made them practically inaccessible to the remoter areas. As some remedy for this the separate district of Palamau, was formed in 1892, comprising the subdivision of Palamau and pargana Tori; in 1902 a subdivision was opened at Gumla, another at Khunti in the heart of the Munda country in 1905, and another at Simdega in 1915. In order to bring the administration more into touch with the rapidly expanding colliery industry at Jharia, the headquarters of the Govindpur subdivision in Manbhum were transferred in 1908 to Dhanbad, where an Additional District Magistrate is now stationed. The growth of the metallurgical industries has also necessitated the opening of a new subdivision at Jamshedpur in

Opening of new districts and subdivisions.

the Singhbhum district which was opened with effect from the 1st June 1923.

An important change affecting the territorial jurisdiction of the Judicial Commissioner took place in 1909-10. In that year, the districts of Sambalpur, Manbhum and Singhbhum were formed into a separate Judge's jurisdiction. The new Judge is stlyed District and Sessions Judge of Manbhum and Sambalpur, and the jurisdiction of the Judicial Commissioner is now confined to Ranchi, Hazaribagh and Palamau.

Judicial changes.

The history of the Santal Parganas as a separate unit does not begin till the year 1855, when by Act XXXVII of that year it was carved out of portions of the Bhagalpur and Birbhum districts and constituted a separate charge. This Act was a direct result of the Santal insurrection of 1855. An enquiry into the causes of this rising had shown the unsuitability of the Regulation system to that tract of territory which was formed into the district, the boundaries of which are given in the Act referred to above; it had shown the rapacity of the police and civil court underlings of the Bhagalpur division, who were working in the interests of extortionate mahajans and, outside the Damin-i-koh, of oppressive zamindars. By the constitution which was given to the district it was to be administered on non-Regulation principles, and was exempted from the operation of the general laws except in regard to civil suits above Rs. 1,000 in value, the collection of revenue in permanently settled estates and the sale of lands for arrears of revenue. The Commissioner of the Bhagalpur Division was to exercise general powers of control and revision over the whole administration, civil and criminal, and in revenue matters was to take the place of the Board of Revenue. The district was to be administered by a Deputy Commissioner and four uncovenanted officers to be called Assistant Commissioners. In 1856 a few simple rules for civil and criminal administration were laid down. These rules in regard to criminal matters remained in operation till 1862, when the Penal Code was introduced; the Criminal Procedure Code was not formally extended, but the local officers were directed to act in accordance with its spirit. A simple code of civil rules was introduced in 1858 and subsequently revised in 1863.

Formation of the deregulationized district of the Santal Parganas, 1855.

Subsequently, Government, accepting the view of the Advocate General, directed the local officers to enforce the provisions of all general Acts passed after 1855, unless the Santal Parganas were specially exempted from their operation. Amongst others Act X of 1859 was allowed to be enforced, and under cover of its provisions much injustice was wrought among the simple inhabitants of the district. Their rents were enhanced, their headmen were evicted from office, and with their headmen they were turned out of their lands in favour of more advanced races. At the same time the Civil Procedure Code (Act VIII of 1859) compelled the courts to decree debts at the extortionate rate of interest demanded by the mahajans and replaced the rule, which had previously been in force in the district, that interest should be limited to twenty-five per cent. In fact the district was fast relapsing into the position from which it had been rescued by Act XXXVII of 1855.

Great discontent ensued and came to a head in 1871, when there were unmistakable signs of unrest among the Santals. Government took alarm and held a full enquiry into the grievances of the raiyats. As a result Act III of 1872 was passed. This Act reaffirmed the exemption of the district from the operation of all Regulations and Acts not specially extended to it. It limited interest on debts to 24 per cent. per annum, and enabled the Lieutenant-Governor to order a settlement of the whole or any part of the district and provided that during settlement operations the jurisdiction of the ordinary civil courts should be suspended. In accordance with the provisions of this Regulation, a settlement was made of the whole district between 1873 and 1879. One of its results was to preserve the Santal village system, under which the whole village community holds the village lands and has rights over the village waste. In 1888 the revision of this settlement in certain estates was undertaken, and after an interval the revision of the whole district was taken up in 1898. The history of these operations and the important amendments of the Santal Parganas Settlement and Rent Law effected by Regulations II of 1904, III of 1907, and III of 1908 are detailed in the settlement report of Mr. H. McPherson, I.C.S.

Act III of 1872 again deregulationizes the district.

Settlements in Santal Parganas.

From 1872 up to the Reforms scheme the district remained exempt from the operation of all Regulations and Acts not specially extended to it. On the introduction of the Reforms scheme the district was declared a "backward area" the effect of which has been considered in the previous chapter. The district has also its own system of judicial administration. The rules that were framed in 1863 were again revised in 1873. Regulation V of 1893 subsequently defined the status of the civil courts, and in regard to criminal jurisdiction constituted the Santal Parganas a Sessions Division and the Deputy Commissioner, Judge of the Courts of Sessions. It also provided that the High Court at Calcutta should (1) exercise jurisdiction in regard to European British subjects; (2) deal with all cases in which sentences of death have been passed, and (3) hear all appeals from orders of acquittal. This Regulation was amended in 1899. The new Regulation constituted the Court of the Sessions Judge of Birbhum, to be the Court of Sessions for the Santal Parganas, the powers of a Sessions Judge previously exercised by the Deputy Commissioner being withdrawn. It further provided that the High Court at Calcutta, in addition to its jurisdiction under the Regulation of 1893, should exercise appellate and revisional jurisdiction in respect of all sessions cases tried by the Judge of Birbhum, and that the Deputy Commissioner should have appellate jurisdiction over the Subordinate Courts of the district, while the Commissioner of Bhagalpur should have appellate jurisdiction over the Deputy Commissioner and revisional jurisdiction over all the Courts of the district.

Judicial administration of the district.

In consequence of the constitution of Bihar and Orissa in 1912, as a province, the Sessions Judge of Bhagalpur has now become the Sessions Judge for the Santal Parganas, and on the formation of the Patna High Court in 1916 that court assumed the jurisdiction previously exercised by the Calcutta High Court.

The 17 Feudatory States or Tributary Mahals named in the margin, were ceded with the rest of Orissa by the Marathas to the British Government on the conquest of Orissa in 1803-04. They were exempted from the operation of the general Regulation system prevailing in the British provinces by sections 36, 13

The Orissa Feudatory States.

and 11 respectively, of Regulations XII, XIII and XIV of 1805.

1. Athgarh.
2. Baramba.
3. Dhenkanal.
4. Hindol.
5. Khandpara.
6. Narsinghpur.
7. Nayagarh.
8. Nilgiri.
9. Rangpur.
10. Talcher.
11. Tigiria.
12. Baud.
13. Daspalla.
14. Keonjhar.
15. Mayurbhanj.
16. Athmallik.
17. Pal Lahara.

Engagements were entered into by the Chiefs binding themselves to maintain submission and loyalty to the East India Company's Government, and to pay an annual *peshkash* or tribute. In 1804, the Judge and Magistrate of Cuttack had certain jurisdiction in these States; but in 1814 he was superseded by a Superintendent, "appointed and directed to endeavour to establish such a control over the conduct of the Rajas as would prevent the commission of crimes and outrages". The Chiefs administered civil and criminal justice under the control of the Commissioner of the Orissa Division, as Superintendent of the States. Heinous offences which required more than two years' imprisonment, and all capital cases were sent to this officer, who also decided political cases and disputed successions. An appeal from his decision lay to the Government of Bengal. The jurisdiction of the Superintendent was defined by Regulation XI of 1816 and Act XXI of 1850. In 1821, Government ruled that the interference of the Superintendent should be chiefly confined to matters of a political nature; to the suppression of feuds and animosities prevailing between the Rajas of adjoining States, or between the Rajas and their subordinate feudatories; to the correction of systematic oppression and cruelty practised by any of the Rajas or by their officers towards the inhabitants; to the cognizance of any apparent gross violation by them of their duties of allegiance and subordination; and generally to important points, which, if not attended to, might lead to violent and general outrage and confusion, or to contempt of the paramount authority of the British Government. The Penal Code was declared applicable to these States by an order of Government in December 1860, and in 1863 the criminal authorities were directed to be guided in their proceedings by the spirit of the Code of Criminal Procedure.

Early history.

In 1862, adoption *sanads* were granted to the Chiefs by Lord Canning. The relations between the British Government and the Orissa Mahals are defined in the various treaties and engagements with the Chiefs detailed in Aitchison's *Treaties*. Questions of inheritance and succession are decided by Regulation XI of 1816. In 1882 the

Treaties and sanads.

Calcutta High Court ruled that the Tributary Mahals of Orissa did not form part of British India. The decision was accepted as final by the Secretary of State, and a special Act, called the Tributary Mahals of Orissa Act, XI of 1893, was passed to indemnify certain persons and to validate acts done by them in the Mahals, and to admit of certain sentences passed therein being carried into effect in British India. Fresh *sanads* were granted to the Chiefs in 1894 defining their relations with the British Government. These were again revised in 1908 and in 1915, while a further revision of the *sanads* of the Chiefs of Gangpur and Bonai in 1919 placed them on an equality with the other Chiefs of Orissa.

The present system of administration.

The Orissa Feudatory States originally comprised three groups. The largest group is that formerly known as the Tributary Mahals or Garhjats, consisting of 17 States. The 17 States with the exception of Baud and Athmallik, were after the conquest of Orissa, attached to the Orissa Division. Baud and Athmallik originally formed part of the South-west Frontier Agency with headquarters at Ranchi, but on the 11th April 1837 were transferred to Orissa. In 1905 two other groups were added to the Orissa States. These were the five Oriya-speaking States of Patna, Kalahandi, Sonpur, Bamra and Rairakhol which were transferred from the Central Provinces, and the two States of Gangpur and Bonai which had hitherto been attached to the Chota Nagpur division. Simultaneously a Political Agent was appointed to assist the Chiefs. Until the 1st April 1922 the Political Agent was in respect of the twenty-four States named above, subordinate to the Commissioner of Orissa, and in respect of the two States of Seraikela and Kharsawan, to the Commissioner of Chota Nagpur. The two Commissioners were then eliminated from the chain of control over the States, and the Political Agent, thenceforward designated Political Agent and Commissioner, became the chief controlling authority under the head of the province. The administration of the Feudatory States is however a central subject, and the Governor in Council is for the purpose of superintending their administration the agent of the Governor-General.

The district of Angul.

The Scheduled district of Angul was formerly one of the Tributary States of Orissa. It was confiscated in 1847 owing to the misconduct of its Chief. The large tract known as the Khond Mals with an area of 800 square miles, which professed

a shadowy allegiance to the State of Baud came under British control in 1855-56 when the Chief of that State made it over to the British; and in 1891 it was formed into a subdivision of the district of Angul. A special Regulation I of 1894 was passed to provide for the peace and good government of the district. This was repealed and its provisions re-enacted and modified by the Angul Laws Regulation (III of 1913). The district of Angul has been kept entirely outside the Reforms Scheme, and the Provincial Legislature has no power to pass laws relating to the district or to vote on any of the budget demands for the administration of the district.

Up to 1833 the whole of the Bengal Presidency, as then constituted (including Bengal, Bihar, Orissa, Assam, Benares and the ceded and conquered Provinces of Upper India) was directly administered by the Governor-General of Bengal in Council. In 1834 the Governor-General in Council became Governor-General of India, and Bengal, Bihar, Orissa and Assam were then governed by the Governor-General in the capacity of Governor without an Executive Council. At the same time it was decided to create a separate Governorship of Agra (to include the territories west of Bihar in Upper India). Shortly afterwards a Lieutenant-Governor for the North-Western Provinces (as they were called) was substituted for a Governor in 1836. Bengal, Bihar and Orissa, however, remained under the Governor-General as Governor, his place during his absence being taken up by a Deputy Governor appointed from among the Members of his Executive Council, till 16 and 17 Vict., Cap. 95, was passed. Section 16 of that Act empowered the Directors of the East India Company to declare "that the Governor-General of India shall not be Governor of the Presidency of Fort William in Bengal, but that a separate Governor shall be appointed, and until such Governor be appointed the Directors may authorise the Governor-General in Council to appoint any servant of the said Company, who shall have been ten years in their service in India to the Office of Lieutenant-Governor, and to declare and limit the extent of the authority of the Lieutenant-Governor to be so appointed". The appointment by 21 and 22 Vict., Cap. 106, section 29, was made subject to the approbation of His Majesty. On the 12th October 1853, the Court of Directors authorised the appointment of

Appointment of Lieutenant-Governor of Bengal, 1854.

a Lieutenant-Governor, and in Home Department resolution No. 415 of 28th April following, the Hon'ble Mr. F. J. Halliday was appointed the first Lieutenant-Governor of the Lower Provinces. Paragraph 8 fixed the extent of his authority. It was to "correspond in all respects with the authority that has been exercised by the Lieutenant-Governors of the North-Western Provinces". No change was made in the territorial jurisdiction of the province for twenty years. In 1874, however, as it was found that the charge of Assam formed an inconvenient addition to the heavy work arising from the administration of the province it was resolved to carry out a change which had been proposed some years previously. In February 1874 the Assam Division, together with the three districts of Sylhet, Cachar and the Garo Hills, was separated and formed into a separate administration under a Chief Commissioner.

Formation of Chief Commissionership of Assam.

When Sir Andrew Fraser became Lieutenant-Governor of the province in 1903, it covered an area of 196,408 square miles, and contained a population of 78,493,310 souls, an area but little less than that of France or of the German Empire and a population exceeding at the time that of the United States. It had long been felt that the administration of this vast area and teeming population was beyond the powers of a single individual. In 1853, before the creation of a Lieutenant-Governorship, Lord Dalhousie had expressed his conviction that the Government of Bengal alone imposed upon the Governor General "a burden which in its present mass is more than mortal man can fitly bear", and twenty years later Sir George Campbell, the then Lieutenant-Governor, wrote: "It is totally impossible that any man can properly perform single-handed the work of this great Government." Since 1873 the population had increased by over 26 millions; this had been accompanied by a remarkable development of the resources of the country, while the spread of English education and the growing power of the press demanded more precise methods of administration. The Government of India accordingly decided that the relief of the Bengal Government was an administrative necessity of the first order, and in July 1905, about a year and a half after the proposals had been first formulated, the decision arrived at was announced.

The first partition, 1905.

The Commissionerships of Dacca, Chittagong and Rajshahi (except the district of Darjeeling), the district of Malda and the State of Hill Tippera were to be separated from Bengal to form a portion of the new province of Eastern Bengal and Assam. The district of Darjeeling was to be attached to the Bhagalpur Commissionership, from which the district of Malda had been taken. At the same time the district of Sambalpur (except the Chandanpur Padampur estate and the Phuljhar Zamindari) and the five Oriya-speaking States of Patna, Kalahandi, Sonpur, Bamra and Rairakhol were to be detached from the Central Provinces and added to the Orissa Division. In return Bengal was to hand over to the Central Provinces the five Native States of Jashpur, Sirguja, Udaipur, Korea, and Changbhakar which formed a solid block of Hindi-speaking population. Within the province of Bengal itself, as it would stand after this partition, the two Oriya-speaking States of Bonai and Gangpur were to be transferred from Chota Nagpur to the Orissa Division to which they were linguistically akin. This decision was carried into effect on the 16th October 1905, the result of these transfers of territory being that the new province of Bengal comprised west Bengal, Bihar and Orissa with an area of 148,592 square miles and a population of 54,662,529 persons.

Eastern Bengal and Assam.

The distribution thus effected was subsequently reconsidered and in their despatch dated the 25th August 1911 to the Secretary of State on this subject, the Government of India wrote: "Various circumstances have forced upon us the conviction that the bitterness of feeling engendered by the partition of Bengal is very widespread and unyielding and that we are by no means at an end of the troubles which have followed from that measure." The proposals for the reconstitution of the two provinces, made in that despatch were accepted by the Secretary of State, and on the 12th December 1912, on the occasion of the Coronation Darbar, His Imperial Majesty the King-Emperor announced at Delhi the creation at as early a date as possible of a Governorship for the Presidency of Bengal, of a new Lieutenant-Governorship in Council administering the areas of Bihar and Orissa, and of a Chief Commissionership of Assam.

The formation of the province of Bihar and Orissa.

In accordance with this announcement the following territories were constituted a province by a proclamation dated the 22nd March 1912 :—

The districts of Bhagalpur, Monghyr, Purnea and the Santal Parganas, in the Bhagalpur Division;

The Patna Division, comprising the districts of Gaya, Patna and Shahabad;

The Tirhut Division, comprising the districts of Champaran, Darbhanga, Muzaffarpur and Saran;

The Chota Nagpur Division, comprising the districts of Hazaribagh, Manbhum, Palamau, Ranchi and Singhbhum, and

The Orissa Division, comprising the districts of Angul, Balasore, Cuttack, Puri and Sambalpur.

The province was to be called the province of Bihar and Orissa, and the Honourable Sir Charles Stuart Bayley, K.C.S.I., was appointed the first Lieutenant-Governor. It came into being on the 1st April 1912. The Executive Council was created five months later after the necessary legal formalities had been complied with, and originally consisted of three members.

The separation of the province from Bengal made the continuance of the control by the Calcutta High Court over the civil and criminal administration of the new province inconvenient and inexpedient. Accordingly in 1916 the Patna High Court was established by letters patent with jurisdiction over the whole area of the new province and powers similar to those of the Calcutta High Court.

Capital of the new province.

In accordance with the proposals made in the despatch referred to above it was decided that Patna should be the capital of the province. The various buildings necessary for the capital of the new province have now been mostly completed. The High Court was ready for occupation when the Court was established in 1916; the Secretariat and Government House were finished in 1919, and Government which up till then had made Ranchi its temporary headquarters finally came to Patna in that year. Ranchi, however, is still used as the summer headquarters of Government.

The general principles which should govern the relations between the Government of India and the subordinate Provincial Governments were laid down in 1834 in a letter addressed by the Court of Directors to the Government of India on the subject of the Charter Act of 1833. Practically it laid down that the Government of India were responsible for everything done in the provinces, but were to discriminate between matters which would primarily be within the scope of the Local Governments where their interference would be of a very exceptional character and matters in which their control would be more detailed and constant. No definite steps towards the attainment of this object appear to have been taken, and the discrimination between the functions of the Imperial and Local Governments and the extent of control normally exercised by the former over the latter, were, up to 1907, the results of gradual administrative evolution. In that year a Royal Commission was appointed "to enquire into the relations now existing for financial and administrative purposes between the Supreme Government and the various Provincial Governments in India, and between the Provincial Governments and the authorities subordinate to them, and to report whether, by measures of decentralization or otherwise, those relations can be simplified and improved, and the system of Government better adapted both to meet the requirements and promote the welfare of the different provinces, and without impairing its strength and unity, to bring the executive power into closer touch with local conditions".

Distribution of functions below the Government of India and the Provincial Governments.

The Commission submitted their report in 1909, and many of their recommendations were followed. The distribution of functions between the central and Provincial Governments has now, however, been entirely altered by the Reforms Scheme, and will be considered in the next chapter.

CHAPTER IV.

Civil Divisions of British Territory.

Administrative divisions of British territory.

For purposes of administration the British territory included in the province is divided into five administrative divisions, each of which is in charge of a Commissioner. These divisions are divided into fourteen Regulation and seven scheduled districts. Regulation districts are those subject to the general regulations and Acts, and scheduled districts are those to which all regulations and Acts do not apply unless they have been specially extended.

The table below shows the divisions, districts and subdivisions of the Regulation districts as they stood on the 1st April 1922.

Division.	District.	Subdivision.
Patna	Patna	City Subdivision.
		Sadr.
		Dinapore.
		Barh.
		Bihar.
	Gaya	Sadr.
		Nawadah.
		Jahanabad.
		Aurangabad.
	Shahabad	Sadr.
		Buxar.
		Sasaram.
		Bhabua.
Tirhut	Saran	Gopalganj.
		Siwan.
		Sadr.
	Champaran	Sadr.
		Bettiah.
	Muzaffarpur	Sitamarhi.
		Sadr.
		Hajipur.
	Darbhanga	Samastipur.
		Sadr.
		Madhubani.

Division.	District.	Subdivision.
Bhagalpur ...	Monghyr	Sadr.
		Begusarai.
		Jamui.
	Bhagalpur	Sadr.
		Supaul.
		Banka.
		Madhipura.
	Purnea	Kishanganj.
		Araria (headquarters at Rohikpur.)
		Sadr.
Orissa	Cuttack	Sadr.
		Jajpur.
		Kendrapara.
	Balasore	Bhadrak.
		Sadr.
	Puri	Sadr.
		Khurda.
	Sambalpur	Sadr.
		Bargarh.

The scheduled districts contain the subdivisions noted below:—

Division.	District.	Subdivision.
Bhagalpur ...	Santal Parganas ...	Deoghar.
		Sadr or Dumka.
		Godda.
		Jamtara.
		Rajmahal.
		Pakaur.
Orissa	Angul	Khondmals.
		Sadr.
Chota Nagpur ...	Hazaribagh	Sadr.
		Chatra.
		Giridih.
	Ranchi	Sadr.
		Khunti.
		Simdega.
		Gumla.
	Palamau	*Nil.*
	Manbhum	Sadr.
		Dhanbad.
	Singhbhum	*Nil.**

* The Dhalbhum subdivision, with headquarters at Jamshedpur was opened under sections 8 and 13 of the Code of Criminal Procedure with effect from the 1st June 1923.

All these scheduled districts have been declared to be "backward tracts" under the Reforms Scheme. Under a notification issued by the Governor-General in Council, dated the 3rd January 1921, it is laid down that any Acts, which are passed by the Indian Legislature or the local legislature of Bihar and Orissa solely applicable to the districts of the Chota Nagpur Division, and the districts of Sambalpur and the Santal Parganas, or to any of them, shall come into operation only on such date and subject to such exceptions and modifications, if any, as the Governor-General in Council or the Governor in Council may direct. With regard to Angul the same notification lays down, that neither the Indian legislature nor the local legislature of Bihar and Orissa shall have power to make laws, to ask questions, to discuss resolutions or to consider proposals for expenditure relating to that district.

Backward tracts.

For purposes of revenue administration the country was divided by the Mughal Government into parganas, each pargana comprising a certain number of villages with their lands. This arrangement still forms the basis of the revenue system; but from its want of compactness, as well as for other reasons, it has been found extremely inconvenient. Detached villages belonging to the same pargana may now be found all over a district, and in some cases in more than one district. Practically the pargana divisions of districts have died out, except for purposes of land revenue payments, in favour of the simpler and more compact arrangements adopted for purposes of police. This arrangement had its origin in Regulation XXII of 1816, by which magistrates were directed to divide their districts into police jurisdictions to be named after the places at which the chief police officers were stationed. And in this way the term *thana*, which originally meant only the police-station, came to be applied to the jurisdiction subordinate to that station. The thana divisions have been for years growing in importance, and are now utilized to a large extent for other than police purposes. As population increased and police administration improved, the old thana areas had to be broken up, and the police-stations supplemented by outposts. These, originally wholly subordinate, have been gradually made independent outposts. The total number of police-stations, including

Parganas.

Thanas.

Outposts.

independent outposts is now 548, and the average area of each is 151·9 square miles. The average population of a police-station is 62,049.

Tahsildari divisions.

The tahsildari system, which obtains in other parts of India for the collection of revenue, and the tahsil division of territory, is not used in this province except in Sambalpur, where there are two such divisions—Sambalpur and Bargarh. In the districts of Balasore, Puri, Sambalpur and Palamau, there are officers styled tahsildars in some of the Government estates. They are generally of the rank of sub-deputy collector.

Villages.

The village is of marked importance as an administrative unit for the purpose of *chaukidari* or village police. Under the Chaukidari Act the District Magistrate may declare any local area or group of dwellings within the district to be a village. Steps have been taken of late years to increase the control of the *panchayat* over chaukidars and to improve the status and increase the responsibility of the president or *sirpanch*. The revival of the ancient village system, or rather the constitution and development of the present village panchayat, was one of the questions dealt with by the Decentralization Commission, and partial effect was given to the recommendations by the appointment of certain sub-deputy collectors to supervise chaukidari work in the Chota Nagpur Division. The Bihar and Orissa Village Administration Act, 1922 (III of 1922), has been enacted recently with the object of creating small self-contained village organizations elected by the villagers themselves from their own number. These organizations may be entrusted with some of the duties in connection with primary education, communications and medical relief now performed by District Boards; they will also have powers in connection with the working of the chaukidari system, and from their numbers a panchayat may be established, which will be given powers of deciding petty civil and criminal cases.

CHAPTER V.

Form of Administration.

Before a description is given of the present form of administration it is necessary to give a brief description of the alterations in the constitution which have been brought about by the Reforms Scheme and which were inaugurated in 1921*. The new constitution is admittedly a fluid and transitional consitution forming a conscious link between a bureaucratic past and a democratic future. It marks a period of political eduction which can only be achieved through the gradual but expanding exercise of responsibility. It represents a peaceful revolution as a result of which an executive, responsible not directly to the people governed but to an external sovereign power, has voluntarily transferred the major part of its responsibilities for certain important functions of Government to Ministers responsible to a popularly elected council, while it has reserved not only complete responsibility for certain other functions, but a modified responsibility even for those transferred to the Ministers. This co-ordination of two different principles of government forms the essential feature of the new constitution both in the legislative, and in the executive, while the Governor represents in his own person the principle of co-ordination and the sanction which unites the two elements into the single body-politic which is the Government.

The new constitution.

In the executive these two principles are represented in this province on the one hand by the Governor in Council and on the other by the Governor acting with his Ministers. The Governor in Council consisted at first of the Governor himself and three councillors of whom two were Indian Civil Servants and one an Indian non-official. After the resignation of Sir Havilland LeMesurier towards the end of

The Executive, Governor in Council and the Ministers.

* A large portion of the next few pages is taken practically verbatim from Mr. Owen's "Bihar and Orissa in 1921".

1922, the number of councillors was reduced to two of whom one is an Indian Civil Servant and the other an Indian non-official. The ministers, two in number, are appointed by the Governor from the elected members of the legislative council and hold office during his pleasure, but their tenure of office depends on their ability to work in harmony with a majority of the Council. If the Council is dissolved, the Minister must seek re-election, and if defeated must either secure another seat or vacate his office. He could not in any case continue as a Minister unless he possessed the confidence of a majority of the new Council. The Governor in Council is responsible directly to the Governor General and to the Crown.

Reserved subjects.

These two arms of the executive body have separate functions. The Governor in Council is responsible for what are called "reserved" subjects broadly for law and order, for the administration of justice, of police and prisons and for the whole land revenue system. The ministers are responsible to the Legislative Council for all those important functions of the administration which have been described as "nation-building activities of Government." These are, in brief, education, public health, medical relief, industries, agriculture, local self-government and excise.* In respect of these transferred subjects it is laid down in general terms in the instructions which the Governor has received from the Crown that the Governor's responsibility is shared with his ministers and must be kept distinct from the direct responsiblity of the Governor in Council to the Crown for "reserved" subjects. He is aware that due regard must be paid to the wishes of the people as expressed by their elected representatives on matters relating to transferred subjects and that assent to these expressions of the people's will should only be refused by him in circumstances which it is to be hoped and expected will be comparatively rare.

Transferred subjects.

Unity of the Executive.

Cohesion between the two arms of the executive is secured in various ways. In the first place the Governor is bound by the instructions issued to him on his appointment, while keeping the responsibility of the two parts of Government clear and distinct, to encourage the

* A full list of these subjects is given in Appendix I to this chapter.

habit of joint deliberation between himself, his councillors and his ministers; and this practice of associated deliberation of the whole executive, including the ministers, on both transferred and reserved subjects and in the preparation of the budget operates to unite both elements, though the decision in each case rests with that part of the executive responsible for the particular subjects involved. A second and more general source of unity lies in the bond of mutual sympathy and common purposes which, as the experience of two years in this province has shown, subsists between the ministers and the members of the Governor's Council. Both parties soon realise their interdependence. Both have as a common object the good administration of the province. The functions of both are in practice frequently found to overlap and the expediency of mutual forbearance as an alternative to the submission of their differences to the controlling decision of the Governor is a lesson soon learned by both.

The new scheme of provincial finance.

The introduction of the Reforms Scheme has brought about a complete change in the financial administration of the province with effect from the financial year 1921-22. The main feature of the scheme is the grant to the province of the largest measure of independence of the Government of India which is compatible with the due discharge by the latter of its own responsibilities. The various subjects with which Government deals are divided into Central Subjects and Provincial Subjects, as shown in Appendix A to this Chapter. The revenue derived from and the expenditure on Central Subjects is entirely controlled by the Government of India, although the Governor in Council is appointed as agent for the administration of some of these subjects, both as regards expenditure and collection of revenue. Provincial subjects on the other hand are entirely under the control of the Local Government who are wholly responsible for all expenditure incurred in their administration and for the collection of revenue derived from them.

Central subjects.

Provincial subjects.

The sources of provincial revenue may be classified under five heads. The first is the existing provincial balance, in other words the accumulated savings of the past ten years. Complete freedom has been granted to draw on this balance, subject only to the

necessity to give due notice at the beginning of the year to the Government of India, who have moreover the power in a financial emergency to limit temporarily, in the interests of India as a whole, the amount which may be drawn. But it must be remembered that this balance is not a source from which annual charges can be met. The second comprises all the receipts which accrue in respect of provincial subjects, of which the most important are land revenue, irrigation, excise, forests and stamps. Certain specified taxes can be imposed by the provincial Legislative Council without the Governor-General's sanction, for example, taxes on non-agricultural land, on succession, on gambling, on registration fees, on advertisements and on amusements, and certain other taxes for the benefit of local bodies. In other cases the sanction of the Central Government is necessary. The fourth comprises the proceeds of loans, which can now be raised by provincial Governments in the open market, as well as recoveries of any loans already given out by the local Government. The power of borrowing is restricted carefully by the specification of certain provincial subjects for which alone loans can be raised; and by the necessity to obtain sanction from either the Secretary of State or the Indian Government according as the loan is raised in England or in India. It is further laid down that both sides of Government must participate in the consideration of any proposal for taxation or borrowing. The recoveries of loans, it must be noted, are not a source from which provincial expansion is possible. Their proper use is to liquidate local debt on the loan account with the Government of India and to finance new loans within the province from any accruing surplus. The fifth source of revenue consists in a share of the tax realized on any increase in the assessable income in the province over and above the income taxed in 1920-21. The amount of the share is three pies on each rupee of the increase of the assessable income* Finally, with the reservation made above, the whole of the provincial revenues are available for provincial expenditure subject only to the necessity to discharge two obligations to the Central Government, namely, first the repayment of the amount

Provincial sources of revenue.

* For instance, the estimated assessable income in 1920-21 was Rs. 658,87,987; the estimated assessable income of 1922-23 is Rs. 10,39,03,987 showing an increase of Rs. 3,80,16,000. The provincial revenues will be credited with three pies on each rupee of this increase, *i.e.*, with Rs. 5,94,000.

of the loans previously borrowed from that Government, and secondly, payment of the interest on the capital expenditure incurred by the Central Government in the construction of irrigation works in this province. The former will be paid by twelve annual instalments, the latter is a charge, which is payable annually, though the amount may vary from year to year. The Provincial Government is also under statutory obligation to accumulate by annual instalments of Rs. 11,62,000, a fund to deal with emergencies of famine. This fund is called the Famine Insurance Fund. Whatever is not spent from this annual assignment does not lapse to the general balances but goes to form the separate fund. The Local Government may in any year when the accumulated total of the fund is not less than six times the amount of the annual assignment, suspend temporarily the provision of the annual assignment.

Famine Insurance Fund.

The Local Government frame their own budget, and the budget estimates are presented to the Legislative Council in the form of a series of demands for grants. The demands are voted on by the Council which may decide that the demands be granted, refused, or reduced. Proposals for appropriation must however emanate from Government, and the Council may not vote for the increase of a grant nor alter its destination. There are also certain other limitations on the Council's control. There are certain items which are "non-voted" and are not submitted to the vote of the council. The council may discuss these items during the general discussion on the budget, but have no power to vote on them. These non-voted items are contributions payable to the Central Government, charges on loans, expenditure of which the amount is prescribed by any law, salaries of persons appointed by the Secretary of State and the salaries of High Court Judges. The only other exception in this province is expenditure on the district of Angul, which is excluded as a backward tract from the operation of the Reform Scheme. The degree of control is greater over expenditure on a " transferred " than on a " reserved "subject. The Council's control over the voting of " transferred " expenditure is final, except for an emergency power reserved to the Governor

The provincial budget.

Non-voted items.

to authorize expenditure, even though it has not been voted by the Council, in the interest of the safety and tranquillity of the province or in order to provide for the continuance of any department. In the case of "reserved" subjects on the other hand the Governor is, as we have seen, primarily responsible, and he is therefore empowered to disregard the Council's vote if to do so is essential to the discharge of that responsibility.

Safeguards to ensure compliance with Council's wishes.

The powers of control described above are exercised by the legislature at the stage of the passing of the budget estimates, that is to say just before the beginning of the financial year. The effective exercise of these powers is further ensured by the appointment of the statutory Standing Committee on Public Accounts. This Committee is composed of a two-thirds majority elected by non-official members of the Legislative Council, and of a minority nominated by the Governor. The Finance Member is Chairman. The function of this Committee is broadly speaking, to ensure that money which the Council has voted is spent within the scope of the demand granted. As a necessary corollary the Committee is bound to bring to the notice of the Council all reappropriations from one grant to another, *i.e.*, transfers of money from one general subject such as Medical to another such as Education, and all transfers of money from one particular item within a grant to another item, if such transference results in increasing the expenditure on items which the Council has deliberately decided to reduce at the time of the voting of the budget.

The Standing Committee on Public Accounts.

Audit.

In order to enable the Public Accounts Committee to discharge these functions certain reports, known as Audit and Appropriation Reports, are laid before it. These reports are prepared by an independent agency, namely the Accountant-General and the Auditor General, who are not under the control of the Local Government and who are generally speaking free to criticise its action in financial matters. The Public Accounts Committee scrutinize these reports with a view to bringing to the notice of Council objectionable items of the nature referred to above.

The internal control of the Legislative Council is supplemented by the close supervision exercised by the provincial Finance Department. This department is not only responsible for the safety of the famine insurance fund, and for watching the Local Government's balances, but statutory rules compel its advice to be taken on all important questions of finance. It examines all taxation and borrowing proposals, prepares the budget, advises on all schemes for new expenditure; and it must be consulted before variations are made in the emoluments of posts, and before posts are created or abolished or new rights (*e.g.*, mineral or forest concessions) granted, or assignments of land revenue made. Finally it ensures that audit irregularities are remedied, and it is its duty not only to lay the audit and appropriation reports before the Public Accounts Committee, but to bring to that committee's notice unauthorized expenditure and financial irregularities. There is thus complete statutory provision for bringing to Council's notice any maladministration of the revenues of the province.

The provincial Finance Department.

Under the new constitution the functions of the secretariat and heads of departments have not been materially changed. Education, agriculture, prisons, medical relief, sanitation excise, co-operation, police and forests continue to be administered by the heads of departments. The Board of Revenue besides being by statute the court of appeal and controlling authority in revenue matters still performs its own functions of supervising the collection of land revenue and controls government, wards and encumbered estates, surveys and settlements, excise, and salt. The reports, complaints and suggestions made by these officers, by the district staff and by local bodies are still dealt with at headquarters by secretaries and their staff. In the secretariat there are, in all, nine departments and in addition to the Chief Secretary there are eight other secretaries, Finance Secretary, Revenue Secretary, Education Secretary, Secretary in the Department of Local Self-Government, Judicial Secretary, Legislative Secretary and two Secretaries in the Public Works Department. Of these the Judicial Secretary is also Superintendent and Remembrancer of Legal Affairs, the Legislative Secretary is also Secretary to the Legislative Council, the Education Secretary is also Director of

Secretariat and heads of departments.

Industries and the two Secretaries in the Public Works Department are also Chief Engineers of the province. While the Governor in Council, the Ministers and the Legislative Council necessarily originate both legislative and executive measures, secretaries to Government perform the functions of expert advisers who have first hand knowledge of the administrative problems with which Government deals. The presence of a selected number of these officers in the Legislative Council serves the additional purpose of providing assistance both to the Ministers and the Members of the Executive Council in the exposition of Government policy.

Executive Administration.

The unit of executive administration is the district. The District Officer is styled District Magistrate and Collector except in the scheduled districts where he is known as Deputy Commissioner. As the District Magistrate, he is local head of the magistracy which is charged with the trial of the less serious criminal cases and the committal of the more important for trial at sessions, but except in the scheduled districts he seldom presides in Court and his share in this part of the administration is practically confined to the distribution of work, the hearing of petty appeals and the general superintendence of his subordinates. There is now a popular demand that the District Officer should be relieved of the supervision and control of the magisterial courts in his district. This question was referred last year to a Committee on the separation of executive and judicial functions and the report of the committee is now under the consideration of Government The police are the agency directly responsible for the detection and prevention of crime. Their local head is the superintendent of police who is responsible to his departmental superiors for the discipline and internal economy of the force but in other matters is subject to the supervision of the district officer and is bound to give effect to his instructions. The district officer is also an *ex officio* district registrar; he pays periodical visits of inspection to the district jail which is in charge of a superintendent usually the Civil Surgeon. He has also important duties in connection with the revenue administration; he is in charge of the collection of the revenue and superintends the management of Government and wards estates. He is in charge of the excise department subject to the

District Magistrate and Collector.

control of the Commissioner of Excise, and generally he is the agency by which administrative orders are given effect to in his district. In many districts he is still Chairman of the District Board but in future he will not be eligible for appointment to this post except in the Chota Nagpur Division.

The District Magistrate is assisted by subdivisional officers, who are sometimes members of the Indian Civil Service but more often members of the Bihar and Orissa Civil Service, and by deputy collectors. The subdivisional officers are in charge of subdivisions where they are responsible for the administration of criminal justice and for certain revenue duties. The deputy collectors are usually stationed at the district headquarters; they combine revenue and magisterial functions and exercise under the control of the Collector many of his powers.

Divisional Commissioners.

Above the district officers are the divisional commissioners, whose duties are principally those of supervision. In revenue cases they exercise appellate and revisional powers which are subject to the supervision and control of the Board of Revenue, but even more important are the duties of general superintendence which they perform in all branches of the administration, acting as intermediaries between Government and the district officers, inspecting, advising, collating information, communicating orders and ready to proceed to the spot in all cases of emergency, serious industrial trouble or political disturbances.

Judicial Administration.

The control of the Judicial administration of the province was transferred from the Calcutta High Court to the High Court of Judicature at Patna, when the latter was opened on the 1st March 1916. The details of the jurisdiction of this court are contained in the letters patent constituting the Court and need not be referred to here. At the time of its original formation the Patna

Patna High Courts.

High Court consisted of a Chief Justice and six Puisne Judges, but in the year 1922 two additional Puisne Judges have been sanctioned temporarily. On the establishment of the High Court three law officers—a Government Advocate, an Assistant Government Advocate, and a Government Pleader—were appointed to represent the Local

Government in that court. Subordinate to the High Court there are fourteen Sessions Judges—including the Registrar of the High Court and the Legal Remembrancer—and twelve Assistant Sessions Judges.

Criminal Justice.

Criminal justice is administered by the High Court, the Courts of Session, and the Courts of the various classes of Magistrates. The High Court on its original side tries by a single Judge, with a jury, all cases in which the accused are European British Subjects, committed for trial by Magistrates in the interior. On its Appellate Side the High Court, by a bench of two or more Judges, disposes of appeals in respect of convictions on trials before a Court of Session. It revises of its own motion or upon references from Sessions Judges or District Magistrates sentences passed or illegal or irregular orders or findings recorded by inferior courts. It confirms, modifies, or annuls all sentences of death passed by Sessions Courts. The Courts of Session are presided over by a single Judge, who tries, with the aid either of a jury or assessors, all cases committed by Magistrates, and decides, sitting alone, all appeals from the decisions of Magistrates of the first class when the sentence exceeds one month's imprisonment or 50 rupees fine. The powers of a Magistrate of the first class extend to sentencing offenders to imprisonment, either rigorous or simple, up to two years, including solitary confinement; to fine to the extent of Rs. 1,000 or imprisonment and fine combined; also to whipping as a separate or additional punishment of certain offences. The Magistrate of the district always exercises first class powers, and he also hears appeals from the Magistrates of the second and third class within the district. Any Magistrate of the first class, duly empowered by the Local Government, can similarly hear and decide all such appeals. A Magistrate may also be empowered to try cases summarily and in such cases no appeal lies from his decision if the sentence does not exceed 3 months imprisonment or a fine of Rs. 200 or is of whipping only. A Magistrate of the second class can award imprisonment up to six months, a fine up to Rs. 200, or both. A Magistrate of the third class can only imprison up to one month, or fine up to Rs. 50, or combine these punishments. Benches of Honorary Magistrates, consisting of two or more Magistrates sitting together, with varying powers have been appointed at almost all the head-

quarter stations and at most of the subdivisional stations in the province. These appointments are ordinarily for a term of three years, but are renewable on the recommendation of the Commissioner.

Extension of jury system.

During the last ten years the trial of cases by juries in Sessions courts has been largely extended. The extension of the jury system in certain cases was first sanctioned in the Patna District, and subsequently in 1918, in the Muzaffarpur and Bhagalpur districts, but with effect from the beginning of 1922 certain offences in seven other districts have been made triable by juries. The most important cases are still however only triable by the Sessions Judge with the aid of assessors.

Civil Justice.

In respect of civil justice, the High Court of Patna exercises appellate, revisional, admiralty, testamentary and intestate, and matrimonial jurisdiction. The functions which in England used to be divided among different courts are here exercised in one court and by the same Judges. Below the High Court are the District and Additional District Judges (who also exercise the functions of Sessions and Additional Sessions Judges as explained in the preceding paragraph), the Subordinate Judges, and the Munsifs. The jurisdiction of District Judge or Subordinate Judge extends to all original suits cognizable by the Civil Courts. The ordinary jurisdiction of a Munsif extends to all suits in which the amount or value of the subject matter in dispute does not exceed one thousand rupees, though the jurisdiction of an individual Munsif may be extended by notification by the Local Government on the recommendation of the High Court to all suits of such value not exceeding Rs. 4,000 as may be specified in the notification. The jurisdiction of a Munsif does not include the powers of a Small Cause Court unless the power is specially conferred. An appeal lies from the High Court to His Majesty in Council, if the value or amount of the subject matter is rupees ten thousand or upwards, or if the decree or order is certified by the High Court to be a fit one for appeal to the Privy Council. Appeals from the decrees and orders of District and Additional District Judges lie to the High Court. Appeals from Subordinate Judges lie to the District Judge, except when the value of the subject matter exceeds five thousand rupees,

when the appeal lies to the High Court. Appeals from Munsifs lie to the District Judge who has power to transfer them to the Subordinate Judge. The High Court, with the sanction of the Local Government, may also direct, when necessary, that appeals from Munsifs may lie to the Court of the Subordinate Judge. The Local Government is empowered under Act XII of 1887 to invest Subordinate Judges and Munsifs with Small Cause Court powers for the trial of cases not exceeding five hundred rupees in value in the case of Subordinate Judges, and one hundred rupees in the case of Munsifs.

A brief description is given below of some of the main departments of Government. The Police Department is controlled by the Inspector-General under the general direction of Government There are under him 4 deputy inspector-generals, 29 superintendents, 28 assistant superintendents and 28 deputy superintendents. Under the orders of the Government of India one-third of the new appointments to the Indian Police has since 1920 been made from Indians, and four such appointments have been made while three deputy superintendents have been promoted to the imperial service. The police force is divided into three branches : the district police, the railway police and the military police. A criminal investigation department has also been formed for the collection and distribution of information relating to professional criminals and criminal tribes, whose operations extend beyond a single district, and to control, advise, and assist in investigations of organised crime and other serious cases in which its assistance may be invoked. There are four companies of military police, including one mounted company, which are maintained as reserves to deal with emergencies and disturbances. The work of the railway police is practically confined to offences committed on the railways but they also co-operate with the district police in watching the movements of bad characters. The sections on the East Indian Railway, the Bengal-Nagpur Railway, and the Bengal North-Western Railway are under the control of the Deputy Inspector-Generals of the Central, Southern and Northern Ranges respectively. The prevention and detection of crime in the province generally is entrusted to the district police. In that work they are assisted by the rural police, known as chaukidars and dafadars, who form no

Police Department.

part of the regular force but are under a statutory obligation to report all cognizable crime at the police station and generally to assist in the prevention and detection of crime. They are paid a small monthly salary which is realized from the villagers by panchayats in Orissa and Bihar and by tahsildars in Chota Nagpur.

Department of Public Works.

The Public Works Department consists of two branches, viz., (1) Roads and Buildings, which also deals with miscellaneous Public Improvements and (2) Irrigation and Railway. Each branch has a Chief Engineer, who is also Secretary to the Local Government. The Roads and Buildings Chief Engineer has an engineer officer under him as Under-Secretary. There is also a non-professional Assistant Secretary. The electrical work of the province is carried out by an Electrical Inspector and a staff of subordinates.

Roads and Buildings Branch.

The Roads and Buildings Branch consists of two circles under the superintendence of two Superintending Engineers who control the Public Works Divisions held by the Executive Engineers for the execution of Imperial and Provincial Works. The Superintending Engineers are also the Inspectors of Works, under the Local Self-Government Act, in respect of all local works of the District Boards, and, in this capacity, are the professional advisers of the Chairman and of the Divisional Commissioners who control the operations of such Boards. They also supervise all works carried out by District Boards.

Irrigation Branch.

The Irrigation Branch is composed of three Circles, each of which is in charge of a Superintending Engineer. In the Irrigation Circles, the Executive Engineers carry out the works of the Roads and Buildings Branch, within the limits of their divisions, in addition to their irrigation duties. The Superintending Engineers of Irrigation Circles also act as Inspectors of Work in regard to local works in the districts (excepting the Puri and Balasore Districts) in their circles. The Executive Engineers of the Cuttack and Balasore Divisions act as Inspectors of Works in regard to local works in the districts of Puri and Balasore respectively. In the Son and Orissa

Circles, there are two Revenue Divisions one under a Deputy Collector and the other under a Sub-Deputy Collector who deal with the assessment and collection of water-rates on the Son and Orissa canals under the control of the Superintending Engineer.

Communications.

Under the Reforms, communications are now treated as a "transferred" subject and have been placed under the control of the Minister of Local Self-Government.

Public roads in Bihar and Orissa are maintained either by the Public Works Department of Government or by District or Municipal Boards.

Government roads.

(i) *Government roads.*—These roads have been placed, except in a few cases, in charge of officers of the Public Works Department, and the Local Government make the necessary provision in their annual budget for the funds required for the construction of new roads and for the maintenance and repair of existing roads and bridges. Some of the roads have been made over to District Boards and Municipalities who maintain them from grants given by Government, and the Local Government are now considering the desirability of transferring all roads with the exception of the main arteries of communication in the province to local bodies.

Roads under control of local bodies.

(ii) *District and Municipal Board roads.*—The Municipal Commissioners are responsible for the control and maintenance of all roads lying within municipal limits. The municipal funds from which these roads are maintained are supplemented in some towns by grants from Government.

Outside municipal limits in all districts except Angul, which is a Government Estate, all roads other than those which are the property of Government or of private persons are vested in District Boards, and are maintained from District Board funds, supplemented in special cases by grants from the Local Government. The repair of the less important district roads is usually entrusted to Local Boards, the necessary funds being allotted to them by the District Boards.

Cantonment roads.

Roads lying within cantonments are controlled and maintained by the Military Authorities from Central Revenues.

Railways.

The Railways in Bihar and Orissa are divided into two classes, i.e., (*i*) railways which were sanctioned by the Secretary of State for India in Council and constructed under the Indian Railways Act, and (*ii*) tramways or light railways sanctioned by the Local Government under the Tramways Act. The former are the main lines of communications and are under the direct control and administration of the Government of India through the Railway Board. The Local Government only make arrangements for the acquisition of land required for railway purposes and furnish their opinion to the Government of India as to the administrative necessity of any new project or alignment of an existing line. The latter are controlled by the Local Government and include the Bakhtiyarpur-Bihar Light Railway, 23 miles in length, the Arrah-Sasaram Light Railway, 60·50 miles in length, the Dehri-Rohtas Light Railway, 23;83 miles in length, the Fatwa-Islahpur Light Railway, 27 miles in length. These light railways which were, with the exception of the Dehri-Rohtas and the Fatwa-Islampur Light Railways, constructed under a guarantee given by the District Boards, are all now under the operations of the Indian Railways Act IX of 1890.

Irrigation works.

Of the four major irrigation works in this province two, viz., the Orissa and the Son Canals were classed as productive and the other two, viz., the Tribeni and Dhaka Canals as protective works, but in accordance with the recent decision of the government of India, all four works have to be classed as unproductive from the year 1921, as none of them at present fulfils the conditions laid down for productive works. The cost of the original construction of these four works was met by the Imperial Government and funds for subsequent outlay on capital works have hitherto been provided by that Government in the case of the Tribeni and Dhaka Canals while funds for the Son and Orissa Canals have been provided equally by both the Imperial and Provincial Governments. The working expenses as well as the revenue derived from these four canal systems have so far been shared equally by the Imperial and Provincial Governments, but in accordance with the new financial

arrangements introduced by the Reform Scheme during 1921-22 all further expenditure in connection with these canals is met by the Provincial Government and the entire revenue derived from them is credited to provincial accounts. The Local Government have however to pay to the Imperial Government the annual interest on the Imperial share of the capital expended. From a financial point of view the canals with the exception of the Son system are not profitable. The Son canals at present pay a return of 5 per cent. on the capital invested exclusive of the interest charges. It is hoped that within a few years they will yield a return of 4 per cent. on the total sum-at-charge. The Orissa, Thibeni and Dhaka Canals barely pay their working expenses and bring in a small return only in years of drought.

The Son and Orissa Canals are used both for irrigation and navigation while the Tribeni and Dhaka Canals are for irrigation only. Considering the great increase in the value of all produce during recent years combined with the high prices of materials and labour as well as the high rate of interest payable on loans, the rates hitherto charged for water supplied from the canals of the province, were absurdly low. An all round increase has therefore been made in the water rates for all crops irrigated by these canals. These new rates will come into full effect from the year 1923-24. The percentages of increases are shown in the table below :—

Increased rate for water.

	Orissa.	Son.	Tribeni.	Dhaka.
Long term lease	40%	28%	50%	50%
Kharif season lease	28%	11%	33%	33%
Rabi season lease	66%	40%	...	60%
Hot weather lease	50%	50%	...	150%

The period of long leases which has been 10 years on the Orissa Canals has also been adopted on the Son Canals from this year.

Area irrigated.

The total area of rice under long leases is about 280,000 acres on the Orissa Canals and 350,000 on the Son Canals. All these areas will not come

under the revised rates at once as leases are renewed from time to time and run for different ten year periods, but it is expected that there will be a steady increase of revenue during the next ten years culminating in an increase of about Rs. 2,80,000 on the Orissa and Rs. 3,50,000 on the Son Canals.

Teur and Saran canals.

There are two other small irrigation works—the Teur (Madhuban) canal, and the Saran canals. The former is a small work intended for irrigation only. The latter have lang been closed to irrigation and are now maintained by a contribution of Rs. 500 from the manager of the Sadowa concern. This Contribution, with a small amount of miscellaneous revenue derived from the canal just covers the cost of maintenance.

Marine Department.

Since the 1st April 1912, the ports of Orissa have been under the control of the Government of Bihar and Orissa. These ports are in charge of one Port Officer who is designated Port Officer of Cuttack and Balasore Ports with headquarters at Chandbali. The Port Officer of Calcutta continued to exercise general control and supervision over the Orissa Ports and is mainly responsible for the working of these ports which he periodically visits and reports on. The Collector of Customs, Balasore, is the Administrator of the Orissa Port Fund. The fund has been working at a deficit balance for several years, the deficit being made good by Government. This fund is not likely to prosper until the shipping trade revives. In order to give relief to the Port Fund the Customs Department share the expenditure with regard to certain items. A steam cutter was placed at the disposal of the Port Officer for the joint use of the Port and Customs Departments of Orissa and it has since been replaced by a steam launch "Garnet." The cost of the upkeep of the steam launch is borne equally by the Customs and Port Departments.

Medical Department.

Since the introduction of the constitutional reforms, medical administration and public health and sanitation have become transferred subjects and are administered by the Governor acting with his Minister. The Medical Department is under the control of the Inspector-General of Civil Hospitals, a senior officer of the Indian Medical

Service who is appointed by the Government of India, after obtaining the concurrence of the Local Government. He is responsible for the administration of institutions such as the medical schools hospitals, and mental hospitals which are directly under Government and also for supervising and inspecting the hospitals and dispensaries maintained by the local bodies which are aided in many cases by substantial grants from provincial revenues. The designation of the Sanitary Department has now been changed to the Public Health Department and that of the Sanitary Commissioner who is the administrative head to Director of Public Health—this change being intended to show the wider scope of the functions of this department. The appointment of the Director of Public Health rests with the Local Government, but in certain cases the sanction of the Government of India is necessary. The Director of Public Health who is directly under the Local Government is responsible for vaccination in the province. Local bodies are primarily responsible for measures against epidemics such as plague or cholera but are supervised by and receive advice and assistance from the Department of Public Health. The work of both the medical and public health departments has been hampered since 1914 by the dearth of officers of the Indian Medical Service, though in many cases officers of the Bihar and Orissa Medical Service who have replaced them have carried out their duties with marked efficiency. There is also a separate engineering branch of the Public Health Department under the control of a Superintending Engineer. The chief duties of this department are the preparation of water-supply or drainage schemes to be carried out by local bodies and the preparation and execution of such schemes if carried out direct by Government.

Public Health Department.

The Sanitary Board, Bihar and Orissa, which previously consisted of nine Government officers was reconstituted in 1919 on a more popular basis, with five non-officials, representatives from the five divisions, as well as Government experts, under the presidency of the Minister of Local Self-Government. The Board which formerly had merely advisory functions is now empowered to approve sanitary projects, subject to the formal approval of Government and to distribute grants to aid local bodies in their schemes.

Sanitary Board.

The public civil service in this province is divided into three main branches, the Indian Civil Service, the Bihar and Orissa Civil Service and the Subordinate Executive Service.

Civil Service.

Recruitment for the Indian Civil Service is now made in India as well as in the United Kingdom. In the United Kingdom appointments are made on the result of a competitive examination. In India they are made on the results of an examination among selected nominees but a few appointments are also made by nomination. Officers of the Indian Civil Service undergo a period of preliminary training in inferior appointments after which they are permanently alloted to either the executive or the judicial branch of the service. Hitherto officers have been called upon to choose between the two branches on completing 12 years, service, but in future they will be required to do so at the end of their 8th year of service. This change has been made in order to ensure that officers will have a more thorough judicial training and will, if they so desire, be able to take study leave and be called to the Bar.

Training of Indian Civil Servants.

The principal appointments held in Bihar and Orissa at present by members of the Indian Civil Service are those of Governor, Member of the Executive Council, Judge of the High Court, Member of the Board of Revenue, Commissioner, Secretary to Government, Secretary, Board of Revenue, Superintendent and Remembrancer of Legal Affairs, Secretary to the Legislative Council, Registrar of the High Court, Commissioner of Excise and Salt and Inspector-General of Registration, Political Agent and Assistant Political Agent in the Orissa Feudatory States, District and Sessions Judge, District Magistrate and Collector, Director of Land Records, Settlement Officer, and Registrar and Deputy Registrar, Co-operative Societies. The number of posts ordinarily reserved for members of the Indian Civil Service which were listed as open to persons who were not members of that service, was, on the constitution of this province, five. In 1915 it was raised to six and it has now been decided to raise it utlimately to ten. Of these ten posts four will be posts of District

Principal appointments.

Listed posts.

and Sessions Judge, of which two will be held by members of the Judicial Branch of the Bihar and Orissa Civil Service and two will be filled by recruitment from the Bar. At present two posts of District and Sessions Judge and five posts of Magistrate and Collector are held on a substantive basis by promoted officers of the Bihar and Orissa Civil Service and one appointment has been made from the Bar.

Provincial Civil Service.

The Bihar and Orissa Civil Service includes all the posts in the higher grades of what were formerly known as the judicial and executive branches of the uncovenanted Civil Service and is divided into separate cadres for executive and judicial officers. In both branches the graded system has been abolished and replaced by a time-scale of pay rising from Rs. 250 to Rs. 850. Above the time-scale there is a selection grade containing six posts on Rs. 1,000 in the executive and two selection grades one containing one post on Rs. 1,200 and the other two posts on Rs. 1,000 in the judicial branch.

Method of appointment to Bihar and Orissa Civil Service.

Appointments to the executive branch of the Bihar and Orissa Civil Service are made partly by nomination and partly by promotion from the Subordinate Executive Service. Direct appointments are made on the recommendations of a selection committee of five members, three of whom are officials and two non-officials. Appointments by promotion are made on the recommendation of the Board of Revenue. Members of the judicial branch are appointed on the nomination of the High Court, and among other qualifications, are required to have taken the B. L., or some analogous degree in law and to have practised as a pleader or barrister for one year.

The system of appointing sub-judges to act as assistant sessions judges which was tried as an experimental measure in 1896 has been continued as it proved successful and there are now 12 assistant sessions judges in the province.

The Subordinate Executive Service is no longer divided into grades which were abolished with effect from the 1st March 1920. Two different time-scales of pay were then introduced, the inferior

scale rising from Rs. 150 to Rs. 300, and the superior scale from Rs. 200 to Rs. 400. Sub-Deputy Collectors who pass the departmental examinations by the higher standard are ordinarily permitted to draw pay on the superior scale, while those who merely pass the obligatory tests by the lower standard remain on the inferior scale. Appointments to this service are made in the same way as appointments to the executive branch of the Bihar and Orissa Civil Service. Sub-Deputy Collectors have now been granted the full status of gazetted officers.

The Subordinate Civil Service.

The Bengal Municipal Act, 1884, was in force in all the Municipalities in Bihar and Orissa throughout the last decade, but it has long been recognized that the Act was out of date, and that if Local Self-Government was to make satisfactory progress, it was necessary to give municipal boards enhanced powers and to free them from internal and as far as practicable from external control. An amending Bill was accordingly prepared by the Lieutenant-Governor in Council and was ready for introduction in the Legislative Council at the time of the announcement of the constitutional reforms. It was, however, decided on the advice of the Legislative Council that a Bill of this importance could be more suitably dealt with by the enlarged and reformed Council and hence it was left to be introduced by the Minister of Local Self-Government. The Bill was accordingly introduced by the Minister in December 1921 and was passed by the Legislative Council in August, 1922. The new Act increases the number of elected commissioners and extends the franchise, it gives the commissioners full power to elect their own Chairman and prohibits them from appointing salaried servants of Government. In this way internal control has been reduced to a minimun. The commissioners are also given full powers to frame their own budgets except in the case of those municipalities which are seriously indebted. They are also given wide powers to frame by-laws in order to adapt the provisions of the Act to local conditions. In matters in which uniformity is necessary, Government have powers to frame rules under the Act.

Municipalities.

The new Municipal Act.

There are at present 58 municipalities in the province, 3 having been established during the last ten years. The elective system

has been extended to all municipalities, and all municipalities except two which did not desire the privilege have the right of electing their own Chairman. Elected non-officials hold the post of Chairman in 38 municipalities but some of the smaller municipalities still prefer the option given them by the Act of 1884 and ask for the services of a Government officer as Chairman. On the whole the work of the municipalities has been satisfactory, though many of them have been placed in financial difficulties owing to the rise in prices and wages caused by the war. The rate-payers however still take little practical interest in municipal administration, though there are signs that their interest is growing.

Number of municipalities.

Committees have been appointed at various times to advise on the lines on which the elective element in municipalities could be increased and external control relaxed and the Ministry in November, 1921, summoned a conference of representatives of district boards and municipalities to advise them further on the important questions that had been raised in regard to the amendment of the two Acts.

Other Acts affecting municipal administration passed during the period under review were the Bihar and Orissa Municipal Survey Act, the Bihar and Orissa Food Adulteration Act and the Patna Administration Act. The Food Adulteration Act has been extended to most of the larger municipalities and *mela* areas in the province; arrangements have been made for the analysis of articles of food and the powers given by the Act are proving useful in some of the larger towns.

Other new Acts affecting municipalities.

Another Act passed during the period was the places of Pilgrimage Act giving enhanced power to the Committees responsible for sanitation in large pilgrim centres such as Puri, Deoghar and Gaya and also giving powers to Government to raise funds to enable these Committees to carry out their duties by the imposition of a terminal tax on pilgrims entering the areas by rail or by sea. The tax has been imposed at Gaya and Puri.

Places of Pilgrimage Act.

During the last ten years liberal grants have been given by Government towards various sanitary projects in municipalities

especially those for water-supply, drainage and conservancy. Among the big schemes that have been completed during the period under report are the water works for Gaya, Muzaffarpur and Patna while the Patna sewerage scheme is nearing completion. The water-supply schemes for the towns of Puri, Motihari and Chapra have not progressed beyond the preliminary stage of boring operations and are held up for lack of funds and though substantial grants have already been sanctioned by Government for the Motihari and Chapra schemes, the large rise in prices makes it difficult for them to be carried out on the scale originally intended.

Financial assistance to municipal schemes.

The Sambalpur Municipality is still governed by the Central Provinces Municipal Act.

District and local boards.

At the end of 1922 the Bengal Local Self-Government Act of 1885 was in force in all districts of the province except Sambalpur where the Central Provinces Local Self-Government Act is in force, the Santal Parganas where a district committee has been appointed under the Cess Act and in Angul. There were therefore district boards in all districts except the Santal Parganas and Angul. The duties of the boards are considerable. They are responsible for the upkeep of communications for the provision of sanitation and medical relief, for the maintenance of primary education and for the establishment of veterinary hospitals. They are also empowered to spend money on improving the water-supply and are responsible for the maintenance of village pounds. During the last 10 years the financial position of district boards has been improved by the assignment to them of the public works cess. At the time of this assignment it was decided that a specified portion of the increased income should be devoted to education, sanitation and medical relief.

Chairmen.

One of the main objects of the Local Self-Government Act of 1885 was to educate the people to interest themselves and to participate in the management of public affairs. During the last 10 years several changes have been introduced with a view to the better accomplishment of this object. In 1912 all chairmen of district

boards were officials but a few years ago the district boards of the Patna, Bhagalpur and Orissa Divisions were empowered to elect non-official members to the post of Chairman. In the Tirhut and Chota Nagpur Divisions the district officers are still Chairmen because in Tirhut the district boards did not wish to abandon the old system while the district boards of Chota Nagpur are too large and too backward for such an experiment. The work of non-official chairmen has proved satisfactory and they have devoted themselves with zeal and enthusiasm to the work and the recently passed Local Self-Government Amendment Act now makes it impossible for an official to be Chairman of a district or local board, except in the Chota Nagpur Division.

Another advance made is in respect of the application of the principle of election in district boards, local boards and union committees. During the last decade the elective system in local boards was in force only in the districts of the Patna Division and in Sambalpur. It has now been further extended to the local boards in the district of Monghyr and would have been extended to other districts, had it not been thought desirable to await the amendment of the Local Self-Government Act and introduce the system of direct election to district boards. For Union Committees the full elective system has been introduced in nearly all the unions of the Patna, Bhagalpur and Orissa Divisions while in the unions of the Tirhut and Chota Nagpur Divisions two-thirds of the members are obtained by election, the remainder being appointed by Government to represent other interests. The franchise qualifications for election of members to local boards have also been revised and brought into line with those for election to provincial legislatures by an amendment of section 9 of the Bengal Local Self-Government Act by an Amending Act of 1920. The Amendment Act of 1923 introduces the system of direct election for district boards.

Local boards.

Local boards have been formed in all districts where there are subdivisions except Ranchi and there are at present 46 local boards. In some cases district boards have transferred a considerable share of their duties to these local boards. The number of Union Committees has risen from five in 1911-12 to 60 at the end of the year 1922. These Union Committees are chiefly constituted in the larger villages

and bazars. The people, however, are slow to realize the value of these boards and they have not been able to make any very material progress in improving sanitary conditions. It has recently been decided that the members of these union boards shall be elected on a popular franchise and it is hoped that with the increase of popular control they will become more vigorous and effective.

The Village Administration Act.

The Village Administration Act to which reference has already been made in Chapter IV will make many alterations in the system of local self-government. District boards are empowered to hand over part of their duties relating to roads, sanitation and primary education to the union boards which will be constituted under the Act. Panchayats that will be formed will be given various powers in connection with the administration of criminal and civil justice. The Act however has only recently been passed and it is too early yet to discuss its effects.

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APPENDIX I.

SCHEDULE I.

Part I.—Central Subjects.

1. (*a*) Defence of India, and all matters connected with His Majesty's Naval Military, and Air Forces in India, or with His Majesty's Indian Marine Service or with any other force raised in India, other than military and armed police wholly maintained by local Governments.

(*b*) Naval and military works and cantonments.

2. External relations, including naturalization and aliens, and pilgrimages beyond India.

3. Relations with States in India.

4. Political charges.

5. Communications to the extent described under the following heads, namely :—

(*a*) railways and extra-municipal tramways, in so far as they are not classified as provincial subjects under entry 6(*d*) of Part II of this Schedule;

(*b*) aircraft and all matters connected therewith; and

(*c*) inland waterways, to an extent to be declared by rule made by the Governor General in Council or by or under legislation by the Indian legislature.

6. Shipping and navigation, including shipping and navigation on inland waterways in so far as declared to be a central subject in accordance with entry 5(*c*).

7. Light houses (including their approaches), beacons, lightships, and buoys.

8. Port quarantine and marine hospitals.

9. Ports declared to be major ports by rule made by the Governor General in Council or by or under legislation by the Indian legislature.

10. Posts, telegraphs and telephones, including wireless installations.

11. Customs, cotton excise duties, income-tax, salt and other sources of all-India revenues.

12. Currency and coinage.

13. Public debt of India.

14. Savings Banks.

15. The Indian Audit Department and excluded Audit Departments, as defined in rules framed under section 96-D (1) of the Act.

16. Civil law, including laws regarding status, property, civil rights and liabilities, and civil procedure.

17. Commerce, including banking and insurance.

18. Trading companies and other associations.

19. Control of production, supply, and distribution of any articles in respect of which control by a central authority is declared by rule made by the Governor General in Council or by or under legislation by the Indian legislature to be essential in the public interest.

20. Development of industries, in cases where such development by a central authority is declared by order of the Governor General in Council, made after consultation with the local Government or local Governments concerned, expedient in the public interest.

21. Control of cultivation and manufacture of opium and sale of opium for export.

22. Stores and stationery, both imported and indigenous, required for Imperial Departments.

23. Control of petroleum and explosives.

24. Geological survey.

25. Control of mineral development, in so far as such control is reserved to the Governor General in Council under rules made or sanctioned by the Secretary of State, and regulation of mines.

26. Botanical Survey.

27. Invention and designs.

28. Copyright.

29. Emigration from, and immigration into, British India, and inter-provincial migration.

30. Criminal law, including criminal procedure.

31. Central police organization.

32. Control of arms and ammunition.

33. Central agencies and institutions for research (including observatories), and for professional or technical training or promotion of special studies.

34. Ecclesiastical administration, including European cemeteries.

35. Survey of India.

36. Archaeology.

37. Zoological Survey.

38. Meteorology.

39. Census and statistics.

40. All-India services.

41. Legislation in regard to any provincial subject, in so far as such subject is in Part II of this Schedule, stated to be subject to legislation by the Indian legislature, and any powers relating to such subject reserved by legislation to the Governor General in Council.

42. Territorial changes, other than inter-provincial, and declaration of laws in connexion therewith.

43. Regulation of ceremonial, titles, orders, precedence, and civil uniform.

44. Immovable property acquired by, and maintained at the cost of, the Governor General in Council.

45. The Public Service Commission.

46. All matters expressly expected by the provisions of Part II of this Schedule from inclusion among provincial subjects

47. All other matters not included among provincial subjects under Part II of this Schedule.

Part II.—Provincial Subjects.

1. Local Self-Government, that is to say, matters relating to the constitution and powers of municipal corporations, improvement trusts, district boards, mining boards of health, and other local authorities established in a province for the purpose of local self-government, exclusive of matters arising under the Cantonments Act, 1910; subject to legislation by the Indian legislature as regards :—

(*a*) the powers of such authorities to borrow otherwise than from a provincial government, and

(*b*) the levying by such authorities of taxation not included in Schedule II to the Scheduled Taxes Rules.

2. Medical administration, including hospitals, dispensaries, and asylum, and provision for medical education.

3. Public health and sanitation and vital statistics; subjects to legislation by the Indian legislature in respect to infectious and contagious diseases to such extent as may be declared by any Act of the Indian legislature.

4. Pilgrimages within British India.

5. Education: provided that—

(*a*) the following subjects shall be excluded, namely :—

(*i*) the Benares Hindu University, [the Aligarh Muslim University] and such other Universities constituted after the commencement of these rules as may be declared by the Governor General in Council to be central subjects, and

(*ii*) Chiefs' Colleges and any institution maintained by the Governor General in Council for the benefit of members of His Majesty's Forces or of other public servants or of the children of such members or servants; and

(*b*) the following subjects shall be subject to legislation by the Indian legislature, namely :—

(*i*) the control of the establishment and the regulation of the constitutions and functions of Universities constituted after the commencement of these rules, and

(*ii*) the definition of the jurisdiction of any University outside the province in which it is situated, and

(*iii*) for a period of five years from the date of the commencement of these rules, the Calcutta University, and the control and organization of secondary education in the presidency of Bengal.

6. Public works included under the following heads, namely :—

(*a*) construction and maintenance of provincial buildings used or intended for any purpose in connexion with the administration of the province; and care of historical monuments, with the exception of ancient monuments, as defined in section 2(1) of the Ancient Monuments Preservation Act, 1904, which are for the time being declared to be protected monuments under section 3 (1) of that Act; provided that the Governor-General in Council may, by notification in the *Gazette of India*, remove any such monument from the operation of this exception;

(*b*) roads, bridges, ferries, tunnels, ropeways, and causeways and other means of communication, subject to such conditions as regards control over construction and maintenance of means of communication declared by the Governor General in Council to be of military importance, and as regards incidence of special expenditure connected therewith, as the Governor General in Council may prescribe;

(*c*) tramways within municipal areas; and

(*d*) light and feeder railways and extra-municipal tramways, in so far as provision for their construction and management is made by provincial legislation; subject to legislation by the Indian legislature in the case of any such railway or tramways which is in physical connexion with a main line or is built on same gauge as an adjacent main line.

7. Water-supplies, irrigation and canals, drainage and embankments, water storage and water power; subject to legislation by the Indian legislature with regard to matters of inter-provincial concern or affecting the relations of a province with any other territory.

8. Land revenue administration, as described under the following heads, namely :—

(*a*) assessment and collection of land revenue;

(*b*) maintenance of land records, survey for revenue purposes, records-of-rights;

(*c*) laws regarding land tenures, relations of landlords and tenants, collection of rents;

(*d*) Courts of Wards, encumbered and attached estates;

(*e*) land improvement and agricultural loans;

(*f*) colonization and disposal of Crown lands and alienation of land revenue; and

(*g*) management of Government estates.

9. Famine relief.

10. Agriculture, including research institutes, experimental and demonstration farms, introduction of improved methods, provision for agricultural education, protection against destructive insects and pests and prevention of plant diseases; subject to legislation by the Indian legislature in respect to destructive insects and pests and plant diseases, to such extent as may be declared by any Act of the Indian legislature.

11. Civil Veterinary Department, including provision for veterinary training, improvement of stock, and prevention of animal diseases; subject to legislation by the Indian legislature in respect to animal diseases to such extent as may be declared by any Act of the Indian legislature.

12. Fisheries.

13. Co-operative Societies.

14. Forests, including preservation of game therein; subject to legislation by the Indian legislature as regards disforestation of reserved forests.

15. Land acquisition; subject to legislation by the Indian legislature.

16. Excise, that is to say, the control of production, manufacture, possession, transport, purchase, and sale of alcoholic liquor and intoxicating drugs, and the levying of excise duties and licence fees on or in relation to such articles, but excluding, in the case of opium, control of cultivation, manufacture and sale for export.

17. Administration of justice, including constitution, powers, maintenance and organization of court of civil and criminal jurisdiction within the province; subject to legislation by the Indian legislature as regards High Courts, Chief Courts, and Courts of Judicial Commissioners, and any courts of criminal jurisdiction.

18. Provincial law reports.

19. Administrators-General and Official Trustees; subject to legislation by the Indian legislature.

20. Non-judicial stamps, subject to legislation by the Indian legislature, and judicial stamps, subject to legislation by the Indian legislature as regards amount of court-fees levied in relation to suits and proceedings in the High Courts under their original jurisdiction.

21. Registration of deeds and documents; subject to legislation by the Indian legislature.

22. Registration of births, deaths, and marriages; subject to legislation by the Indian legislature for such classes as the Indian legislature may determine.

23. Religious and charitable endowments.

24. Development of mineral resources which are Government property, subject to rules made or sanctioned by the Secretary of State, but not including the regulation of mines.

25. Development of industries, including industrial research and technical education.

26. Industrial matters included, under the following heads, namely :—

(*a*) factories ;

(*b*) settlement of labour disputes ;

(*c*) electricity ;

(*d*) boilers ;

(*e*) gas ;

(*f*) smoke nuisances ; and

(*g*) welfare of labour ; including provident funds, industrial insurance (general, health and accident), and housing ;

subjects as to heads (*a*), (*b*), (*c*), (*d*) and (*g*) to legislation by the Indian legislature.

27. Stores and stationery, subject, in the case of imported stores and stationery, to such rules as may be prescribed by the Secretary of State in Council.

28. Adulteration of foodstuffs and other articles ; subject to legislation by the Indian legislature as regards import and export trade.

29. Weights and measures ; subject to legislation by the Indian legislature as regards standards.

30. Ports, except such ports as may be declared by rule made by the Governor General in Council or by or under Indian legislation to be major ports.

31. Inland waterways, including shipping and navigation thereon so far as not declared by the Governor General in Council to be central subjects, but subject as regards inland steam-vessels to legislation by the Indian legislature.

32. Police, including railway police ; subject in the case of railway police to such conditions as regards limits of jurisdiction and railway contributions to cost of maintenance as the Governor General in Council may determine.

33. The following miscellaneous matters, namely :—

(*a*) regulation of betting and gambling ;

(*b*) prevention of cruelty to animals ;

(*c*) protection of wild birds and animals ;

(*d*) control of poisons, subject to legislation by the Indian legislature ;

(*e*) control of motor vehicles, subject to legislation by the Indian legislature as regards licences valid throughout British India ; and

(*f*) control of dramatic performances and cinematographs, subject to legislation by the Indian legislature in regard to sanction of films for exhibition.

34. Control of newspapers, books and printing presses ; subject to legislation by the Indian legislature.

35. Coroners.

36. Excluded areas.

37. Criminal tribes ; subject to legislation by the Indian legislature.

38. European vagrancy ; subject to legislation by the Indian legislature.

39. Prisons, prisoners (except State prisoners), and reformatories, subject to legislation by the Indian legislature.

40. Pounds and prevention of cattle trespass.

41. Treasure trove.

42. Libraries (except the Imperial Library) and museums (except the Indian Museum, the Imperial War Museum, and the Victoria Memorial, Calcutta) and Zoological Gardens.

43. Provincial Government Presses.

44. Elections for Indian and provincial legislatures; subject to rules framed under sections 64(1) and 72-A(4) of the Act.

45. Regulation of medical and other professional qualifications and standards; subject to legislation by the Indian legislature.

46. Local Fund Audit, that is to say, the audit by Government agency of income and expenditure controlled by local bodies.

47. Control, as defined by rule 10, of members of all-India and provincial services serving within the province; and control, subject to legislation by the Indian legislature, of public services within the province other than all-India services.

48. Sources of provincial revenue, not included under previous heads, whether :—

(*a*) taxes included in the Schedule to the Scheduled Taxes Rules; or

(*b*) taxes not included in those Schedule, which are imposed by or under provincial legislation which has received the previous sanction of the Governor General.

49. Borrowing of money on the sole credit of the province; subject to the provisions of the local Government (Borrowing) Rules.

50. Imposition by legislation of punishments by fine, penalty, or imprisonment for enforcing any law of the province relating to any provincial subject; subject to legislation by the Indian legislature in the case of any subject in respect of which such a limitation is imposed under these rules.

51. Any matter which, though falling within a central subject, is declared by the Governor General in Council to be of a merely local or private nature within the province.

52. Matters pertaining to a central subject in respect of which powers have been conferred by or under any law upon a local Government.

SCHEDULE II.

List of Provincial Subjects for Transfer.

Column I.	Column II.
1. Local Self-Government—that is to say, matters relating to the constitution and powers of municipal corporations, improvement trusts, district boards, mining boards of health and other local authorities established in the province for purposes of local self-Government, exclusive of matters arising under the Cantonments Act, 1910; subject to legislation by the Indian legislature as regards (*a*) the powers of such authorities to borrow otherwise than from a provincial Government, and (*b*) the levying by such authorities of taxation not included in Schedule II to the Scheduled Taxes Rules.	All Governors' provinces.

List of Provincial Subjects for Transfer—contd.

Column I.	Column II.
2. Medical administration, including hospitals, dispensaries and asylums, and provision for medical education.	All Governors' provinces
3 Public health and sanitation and vital statistics; subject to legislation by the Indian legislature in respect to infectious and contagious diseases to such extent as may be declared by any Act of the Indian legislature.	Ditto.
4. Pilgrimages within British India	Ditto.
5. Education, other than European and Anglo-Indian education, provided that—	Ditto.
(*a*) the following subject shall be excluded namely :—	
(*i*) the Benares Hindu University, [the Aligarh Muslim University] and such other Universities constituted after the commencement of these rules as may be declared by the Governor-General in Council to be central subjects, and	
(*ii*) Chiefs' Colleges and any institution maintained by the Governor General in Council for the benefit of members of His Majesty's Forces or of other public servants or of the children of such members or servants; and	
(*b*) the following subjects shall be subject to legislation by the Indian legislature, namely :—	
(*i*) the control of the establishment and the regulation of the constitutions and functions of Universities constituted after the commencement of these rules, and	
(*ii*) the definition of the jurisdiction of any University outside the province in which it is situated, and	
(*iii*) for a period of five years from the date of the commencement of these rules, the Calcutta University and control and organization of secondary education in the Presidency of Bengal.	

[ ] *Vide* Reforms Office Notification No. 11-S, dated the 10th February 1921.

List of Provincial Subjects for Transfer—contd.

Column I.	Column II.
6. Public Works included under the following heads, namely :— (*a*) construction and maintenance of provincial buildings, other than residences of Governors of provinces, used or intended for any purpose in connection with the administration of the province on behalf of the departments of Government concerned, save in so far as the Governor may assign such work to the departments using or requiring such buildings; and care of historical monuments, with the exception of ancient monuments as defined in section 2(1) of the Ancient Monuments Preservation Act, 1904, which are for the time being declared to be protected monuments under section 3(1) of that Act: provided that the Governor General in Council may, by notification in the *Gazette of India*, remove any such monument from the operation of this exception; (*b*) roads, bridges, ferries, tunnels, ropeways and causeways, and other means of communication, subject to such conditions as regards control over construction and maintenance of means of communication declared by the Governor-General in Council to be of military importance, and as regards incidence of special expenditure connected therewith, as the Governor General in Council may prescribe; (*c*) tramways within municipal areas; and (*d*) light and feeder railways and extra-municipal tramways, in so far as provision for their construction and management is made by provincial legislation; subject to legislation by the Indian legislature in the case of any such railway or tramway which is in physical connection with a main line or is built on the same gauge as an adjacent main line.	All Governors' provinces, except Assam.
7. Agriculture, including research institutes, experimental and demonstration farms, introduction of improved methods, provision for agricultural education, protection against destructive insects and pests and prevention of plant diseases; subject to legislation by the Indian legislature in respect to destructive insects and pests and plant diseases to such extent as may be declared by any Act of the Indian legislature.	All Governors' provinces.
8. Civil Veterinary Department, including provision for veterinary training, improvement of stock, and prevention of animal diseases; subject to legislation by the Indian legislature in respect to animal diseases to such extent as may be declared by any Act of the Indian legislature.	Ditto.

List of Provincial Subjects for Transfer—concld.

Column I.	Column II.
9. Fisheries	All Governors' provinces, except Assam.
10. Co-operative Societies	All Governors' provinces.
11. Forests, including preservation of game therein; and all buildings and works executed by the Forest Department; subject to legislation by the Indian legislature as regards disforestation of reserved forests.	Bombay.
12. Excise, that is to say, the control of production, manufacture, possession, transport, purchase, and sale of alcoholic liquor and intoxicating drugs, and the levying of excise duties and license fees on or in relation to such articles, but excluding, in the case of opium, control of cultivation, manufacture, and sale for export.	All Governors' provinces, except Assam.
13. Registration of deeds and documents, subject to legislation by the Indian legislature.	All Governors' provinces.
14. Registration of births, deaths, and marriages, subject to legislation by the Indian legislature for such classes as the Indian legislature may determine.	Ditto.
15. Religious and charitable endowments	Ditto.
16. Development of industries, including industrial research and technical education.	Ditto.
17. Stores and stationery required for transferred departments; subject, in the case of imported stores and stationery, to such rules as may be prescribed by the Secretary of State in Council.	Ditto.
18. Adulteration of food-stuffs and other articles; subject to legislation by the Indian legislature as regards import and export trade.	Ditto.
19. Weights and measures; subject to legislation by the Indian legislature as regards standards.	Ditto.
20. Libraries (other than the Imperial Library). Museums (except the Indian Museum, the Imperial War Museum, and the Victoria Memorial, Calcutta) and Zoological Gardens.	Ditto.

APPENDIX II.

LIEUTENANT-GOVERNORS.

1st April 1912 *to* 19*th November* 1915.

The Hon'ble Sir Charles Stuart Bayley, G.C.I.E., K.C.S.I., I.S.O.

19*th November* 1915 *to* 4*th April* 1918 *and* 12*th August* 1918 *to* 29*th December* 1920.

The Hon'ble Sir Edward Albert Gait, K.C.S.I., C.I.E., I.C.S.

4*th April* 1918 *to* 11*th August* 1918.

The Hon'ble Mr. E. V. Levinge (acting), C.S.I.

GOVERNORS.

30*th December* 1920 *to* 29*th November* 1921.

His Excellency the Right Honourable Satyendra Prasanna Baron Sinha of Raipur, P.C., K.C.S.I., K.C.

29*th November* 1921 *to* 11*th April* 1922.

His Excellency the Hon'ble Sir Havilland LeMesurier (acting), K.C.I.E., C.S.I., I.C.S.

12*th April* 1922.

His Excellency Sir Henry Wheeler, K.C.S.I., K.C.I.E., I.C.S.

MEMBERS, EXECUTIVE COUNCIL.

1*st August* 1912 *to* 19*th November* 1915.

The Hon'ble Mr. E. A. Gait, C.S.I., C.I.E.

1*st August* 1912 *to* 9*th November* 1913, *and* 15*th May* 1914 *to* 31*st October* 1917.

The Hon'ble Mr. E. V. Levinge, C.S.I.

1*st August* 1912 *to* 5*th November* 1917.

The Hon'ble Maharaja Bahadur Sir Rameshwar Singh of Darbhanga.

19*th November* 1915 *to* 9*th December* 1916.

The Hon'ble Sir W. H. H. Vincent, Kt.

10*th November* 1913 *to* 14*th May* 1914, 28*th February* 1916 *to* 20*th September* 1916, *and* 10*th December* 1916 *to* 16*th April* 1921.

The Hon'ble Mr. W. Maude, C.S.I.

10*th April* 1914 *to* 8*th September* 1914 *and* 1*st November* 1917 *to* 29*th November* 1921 *and* 12*th April* 1922 *to* 31*st October* 1922.

The Hon'ble Mr. H. LeMesurier.

6*th November* 1917 *to* 11*th August* 1918.

The Hon'ble Mr. Saiyid Sharf-ud-din, Bar-at-Law.

12*th August* 1918 *to* 17*th August* 1919.

The Hon'ble Sir Saiyid Ali Imam, K.C.S.I.

17*th August* 1919 *to* 19*th May* 1921.

The Hon'ble Rai Bahadur Krishna Sahay.

16*th April* 1921.

The Hon'ble Mr. Hugh McPherson, C.S.I., I.C.S.

20*th May* 1921.

The Hon'ble Mr. Sachchidananda Sinha.

MINISTERS.

1*st January* 1921.

The Hon'ble Khan Bahadur Saiyid Muhammad Fakhr-ud-din.

6*th January* 1921 *to* 9*th March* 1923.

The Hon'ble Mr. Madhusudan Das, C.I.E.

27*th March* 1923.

The Hon'ble Babu Ganesh Datta Singh.

APPENDIX III.

ORGANIZATION OF GOVERNMENT.

APPOINTMENT DEPARTMENT.

MEMBER-IN-CHARGE—THE HON'BLE MR. MCPHERSON.

Central Subjects.

1. The Indian Civil Service (40).

Reserved Subjects.

2. The Bihar and Orissa Civil Service (including judicial officers) and of the Subordinate Civil Service (47).

NOTE.—The immediate control of officers of the services specified in entries 1 and 2 who are employed in branches of the administration controlled by other Departments of the Secretariat (except the Judicial Department) rests with the Department concerned. But the Appointment Department should invariably be consulted before any proposed order inflicting punishment or censure is submitted to His Excellency the Governor, and action which may terminate in the dismissal or removal of any member of these services is taken in the Appointment Department.

3. Appointments of High Court Judges.

4. Appointments to listed posts.

5. Elections to the Indian and provincial legislatures (except bye-elections).

6. Administrative charge of the residences of officers of the Indian Civil Services other than residences in the New Capital at Patna or at Ranchi.

Mixed subjects and functions performed on behalf of all Departments of Government.

7. The Civil List.

8 Interpretation of all rules affecting the public services framed under the Government of India Act, other than those rules which regulate pay, leave, allowances and pensions, and other financial matters.

9. Holidays.

10. Departmental examinations.

Special subjects in charge of His Excellency the Governor.

11. All appointments which under the Rules of Business are filled by His Excellency the Governor himself and not by the Local Government, including the nomination of members of the Legislative Council.

12. The personal staff of His Excellency the Governor.

13. The Rules of Business.

POLITICAL DEPARTMENT.

MEMBER-IN-CHARGE—THE HON'BLE MR. MCPHERSON.

Central Subjects.

1. Defence of India and all matters connected with His Majesty's Naval, Military and Air Force in India, or with His Majesty's Indian Marine Service or with any other force raised in India other than military and armed police wholly maintained by Local Governments 1(*a*).

2. Naval and military works and cantonments 1(*b*).

3. External relations, including naturalization and aliens, and pilgrimages beyond India (2).

NOTE.—This entry includes passports.

4. Political pensions and other political charges (4).

5. Control of arms and ammunition (32).

6. The Indian Police Service (40).

7. Territorial changes, other than inter-provincial, and declaration of laws in connection therewith (42).

8. State prisoners (47).

MEMBER-IN-CHARGE—HIS EXCELLENCY THE GOVERNOR.

9. Relations with states in India (3).

10. Regulation of ceremonial, titles, orders, precedence and civil uniform (43).

MEMBER-IN-CHARGE—THE HON'BLE MR. MCPHERSON.

Reserved Subjects.

11. Political-internal general.

12. Exemption from personal attendance in civil courts (17).

13. Police, including railway police (32).

This item covers :—

(*a*) Changes in jurisdiction of thanas and outposts.

(*b*) Village police.

14. Regulation of betting and gambling [33(*a*)].

15. Control of poisons [33(*d*)].

16. Control of dramatic performances and cinematographs [33(*f*)].

17. Control of newspapers, books, and printing presses (34).

18. The following subjects relating to the district of Angul :—

(*a*) Proposals for the general revision of the special laws and regulations applicable only to Angul.

(*b*) All grants made for public improvements in Angul and sources of local revenue peculiar to the district (36).

19. Criminal tribes (37).

20. Political prisoners (39).

21. Rewards for the destruction of wild animals.

22. Control of all officers serving in the police department (47).

23. Administrative charge of all buildings occupied by the police department.

24. Buildings, the construction and maintenance of which has been assigned by the Governor to the police department.

FINANCE DEPARTMENT.

FINANCE BRANCH.

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

Central Subjects.

1. Income-tax (11).

2. Currency and coinage (12).

3. Public debt of India (13).

4. Savings Banks (14).

5. The Indian Audit Department and excluded Audit Departments (15).

Reserved Subjects.

6. Stamps (20).

7. Provincial Government Presses (43).

8. Local Fund Audit, that is to say audit by Government agency of income and expenditure controlled by local bodies (46).

9. Borrowing of money on the sole credit of the province (49).

10. All duties imposed upon the Finance Department by rules 36 to 45 of the Devolution Rules.

Mixed subjects and functions performed on behalf of all Departments of Government.

11. Stationery (P. 27 T. 17).

12. General revisions of clerical and menial establishments originating in causes which affect all Departments alike.

13. Treasuries and defalcations.

14. Commutation of pensions and compassionate gratuities.

15. Contract grants.

16. Interpretation of financial codes and other questions of a financial nature.
17. The Secretariat Instructions.
18. Secretariat clerical and menial establishments.
19. Liveries, tents, forms.
20. Ranchi rules.
21. The general provident fund and the I. C. S. provident fund.
22. Advances for the purchase of conveyances, for house building and for passages.
23. Grain compensation allowance.
24. Grant of rent-free quarters.

COMMERCE BRANCH.*

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

Central Subjects.

1. Shipping and navigation (6).
2. Lighthouses, including their approaches, beacons, lightships and buoys (7).
3. Port-quarantine (8).
4. Posts, telegraphs and telephones, including wireless installations (10).
5. Customs (11).
6. Salt except in so far as this subject is assigned to the Local Self-Government Department (11).
7. Commerce, including banking (17).

NOTE.—Includes traffic registration.

8. Joint stock companies.

NOTE.—Includes provident insurance societies and life-insurance companies.

9. Control of petroleum and explosives (23).
10. Regulation of mines (25).
11. Inventions and designs (27).
12. Emigration from and immigration into British India and interprovincial migration (29).

Reserved Subjects.

13. Factories (26-*a*).
14. Settlement of labour disputes (26-*b*).
15. Boilers (26-*d*).
16. Smoke nuisance (26-*f*).
17. Welfare of labour including provident funds, industrial insurance (general health and accident) and housing (26-*g*).
18. Ports (30).

* Temporarily included in Revenue Department.

Mixed Subjects.

19. Stores (P. 27 T. 17).

REVENUE DEPARTMENT.

MEMBER IN CHARGE—THE HON'BLE MR. MCPHERSON.

REVENUE LIST.

Central Subjects.

1. Control of foodstuffs (19).
2. Geological survey (24).
3. Botanical survey (26).
4. Survey of India (35).

NOTE.—Includes the preparation and supply of maps for provincial purposes.

5. Meteorology (38).
6. Crop reports and forecasts (39).
7. The Indian Forest Service (40).
8. Administration of the Non-ferrous Minerals Act (47).

Reserved Subjects.

9. Land Revenue Administration as described under the following heads :—
   (*a*) Assessment and collection of land revenue.
   (*b*) Maintenance of land records, survey for revenue purposes, record-of-rights.
   (*c*) Laws regarding land tenures, relations of landlords and tenants, collection of rents.
   (*d*) Court of wards, encumbered and attached estates.
   (*e*) Land improvement and agricultural loans.
   (*f*) Colonization and disposal of crown lands and alienation of land revenue, and
   (*g*) Management of Government estates (18).

NOTE.—Includes jurisdiction of revenue officers, partition of estates, collection and assessment of cess (including embankment cess), land registration, administration of the Public Demands Recovery Act, and Santal Parganas petitions (settlement and miscellaneous revenue).

10. Famine relief (9).
11. Forests, including preservation of game therein (14).
12. Land acquisition (15).
13. Development of mineral resources which are Government property (24).
14. Protection of wild birds and animals 33(*c*).
15. Control of clerical and menial establishments of the Board of Revenue, Commissioners of Divisions, and district and subdivisional officers (47).

16. Control of all officers employed in the forest department (47).

17. Control of all officers employed under the Director of Land Records and Surveys, save in so far as the control of officers of the Indian Civil Service, Bihar and Orissa Civil Service, and Subordinate Civil Service is allotted to the Appointment Department (47).

18. Administrative charges of buildings in the occupation of the Board of Revenue, Commissioners of Divisions and district and subdivisional officers.

19. Administrative charge of residences of revenue officers other than officers of the Indian Civil Service.

GENERAL LIST.

Central Subjects.

MEMBER-IN-CHARGE—HIS EXCELLENCY THE GOVERNOR.

1. Ecclesiastical administration, including European cemeteries (34).

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

2. Archæology (36).
3. Census (39).
4. Treasure trove (41).
5. Languages and linguistic survey (47).
6. Ethnology and ethnography (47).

Mixed subjects and functions performed on behalf of all Departments of Government.

7. Regulation of the supply of Government publications to Government and to the public.

8. Administrative charge of circuit houses.

9. General administration report.

10. Libraries, maintained for official use only, in the Secretariat and in the offices of the Board of Revenue, Commissioners of Divisions, district officers and subdivisional officers.

JUDICIAL DEPARTMENT.

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

Central Subjects.

1. Civil Law, including laws regarding status, property, rights, liabilities and civil procedure (16).

This item includes opinions on bills circulated by the Government of India on subjects not specifically dealt with by any other administrative department.

2. Criminal law, including criminal procedure (13).

Reserved Subjects.

3. Administration of justice, including constitution, powers, maintenance and organization of courts of civil and criminal jurisdiction within the province (17).

This subject includes—

(*a*) Acts—administration and extension of—for judicial purposes.

(*b*) Appeals against sentences in lower courts.

(*c*) Civil courts—buildings and establishments.

(*d*) Court language.

(*e*) Examinations—pleadership and muktearship.

(*f*) Extradition of fugitive offenders.

(*g*) Forms—judicial.

(*h*) Law officers of Government in all courts—appointment of.

(*i*) Honorary Magistrates and other unpaid courts—appointment and removal of.

(*j*) Intestate property.

(*k*) Jurisdiction of judicial officers.

(*l*) Jurors and assessors.

(*m*) Law books, law reports, chronological tables.

(*n*) Legal business—conduct of.

(*o*) Lunatics, criminal.

(*p*) Petitions for mercy from, and remission or suspension (under section 401 of the Criminal Procedure Code) of the sentences of all prisoners except political prisoners.

(*q*) Release of transported convicts.

(*r*) Probate and letters of administration granted to persons of European extraction.

4. Provincial law reports (18).

5. Administrator-General and Official Trustee (19).

6. Prevention of cruelty to animals [33(*b*)].

7. European vagrancy (38).

8. Prisons (39).

9. Control of all officers serving in the jails department (47).

10. Control of all clerical and menial establishments employed—

(*a*) in the High Court (excluding the Registrar and Deputy and Assistant Registrars),

(*b*) in the offices of or subordinate to District and Sessions Judges.

11. Imposition by legislation of punishments by fine, penalty or imprisonment for enforcing any law of the province relating to any provincial subject (50).

12. Administrative charge of all buildings occupied by the jails department and by civil courts.

13. Administrative charge of all residences of judicial officers other than officers of the I.C.S.

EDUCATION DEPARTMENT.

EDUCATION BRANCH.

Central Subjects.

MEMBER-IN-CHARGE—HIS EXCELLENCY THE GOVERNOR.

1. All questions arising under entries 5 to 8 in the district of Angul (36).
2. The Indian Educational Service (40).

Reserved Subjects.

MEMBER-IN CHARGE—THE HON'BLE MR. MCPHERSON.

3. European and Anglo-Indian Education (5).

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

4. Reformatories (39).

Transferred Subjects.

MINISTER-IN-CHARGE—THE HON'BLE EDUCATION MINISTER.

5. Education (other than European and Anglo-Indian Education) (P. 5 and T. 5).

6. Libraries (other than libraries for official use only), museums and zoological gardens (P. 42 and T. 20).

Mixed Subjects.

7. Control of all officers serving in the Education Department or in reformatories (P. 47).

8. Administrative charge of all buildings occupied by the Education Department or by reformatories.

NOTE.—Subjects 7 and 8 are reserved or transferred according as the officer is employed, or the building occupied for the administration of a reserved or a transferred subject.

DEVELOPMENT BRANCH.

Central Subjects.

MEMBER-IN-CHARGE—HIS EXCELLENCY THE GOVERNOR.

1. The Indian Agricultural Service (40).
2. The Imperial branch of the Civil Veterinary Department (40).

Reserved Subjects.

3. All questions arising under entries 4 to 13 in the district of Angul.

MINISTER-IN-CHARGE—THE HON'BLE EDUCATION MINISTER.

Transferred Subjects.

4. Agriculture, including research institutes, experimental and demonstration farms, introduction of improved methods, provision for agricultural education, protection against destructive insects and pests and prevention of plant diseases (P. 10 and T. 7).

5. Civil Veterinary Department, including provision for veterinary training, improvement of stock, and prevention of animal diseases (P. 11 and T. 8).

6. Fisheries (P. 12 and T. 9).

7. Co-operative societies (P. 13 and T. 10).

8. Registration of deeds and documents (P. 21 and T. 13).

9. Registration of births, deaths and marriages (P. 22 and T. 14).

10. Religious and charitable endowments (P. 23 and T. 15).

11. Development of industries including industrial research and technical education (P. 25 and T. 16).

12. Control of all officers serving in the agricultural, civil veterinary, fisheries, co-operative, registration and industries departments (P. 47).

13. Administrative charge of buildings occupied by the agricultural, civil veterinary, fisheries, co-operative, registration and industries departments.

LOCAL SELF-GOVERNMENT DEPARTMENT.

Central Subjects.

MEMBER-IN-CHARGE—HIS EXCELLENCY THE GOVERNOR.

1. The Indian Medical Service (40).

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

2 Salt, in so far as that subject is administered by the Commissioner of Excise (11).

Reserved Subjects.

MEMBER-IN-CHARGE—HIS EXCELLENCY THE GOVERNOR.

3. All questions arising under items 7 to 16 in the district of Angul (36).

4. Regulation of medical qualifications and standards (45).

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

5 Control of motor vehicles [33 (c)].

MEMBER-IN-CHARGE—THE HON'BLE MR. MCPHERSON.

6. Pounds and prevention of cattle trespass (40).

Transferred Subjects.

MINISTER-IN-CHARGE—THE HON'BLE MINISTER FOR LOCAL SELF-GOVERNMENT.

7. Local Self-Government, that is to say, matters relating to the constitution and powers of municipal corporations, improvement trusts, district boards, mining boards of health, and other local authorities established in the province for purposes of Local Self-Government exclusive of matters arising under the Cantonment Act, 1910 (P. 1 and T. 1).

8 Medical administration including hospitals, dispensaries and asylums and provision for medical education (P. 2 and T. 2).

9. Public health and sanitation and vital statistics (P. 5 and T. 3).

10. Pilgrimages within British India (P. 4 and T. 4).

11. Tramways within municipal areas [P. 6 (*c*) and T. 6 (*c*)].

12. Adulteration of foodstuffs and other articles (P. 28 and T. 18).

13. Weights and measures (P. 29 and T. 19).

14. Control of officers serving in the medical and public health departments (P. 47).

15. Administrative charge of all buildings occupied by the medical and public health departments.

MINISTER-IN-CHARGE—THE HON'BLE EDUCATION MINISTER.

16. Excise, that is to say the control of production, manufacture, possession and sale of alcoholic liquor and intoxicating drugs, and the levying of license fees on or in relation to such articles (P. 16 and T. 12).

17. Control of officers serving in the excise department (47).

18. Administrative charge of all buildings occupied by the excise department.

PUBLIC WORKS DEPARTMENT.

IRRIGATION BRANCH.

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

Central Subjects.

1. Communications to the extent described under the following heads :—

(*a*) Railways and extra municipal tramways.

(*b*) Aircraft and all matters connected therewith (5).

2. The Indian Service of Engineers (40).

Reserved Subjects.

3. Water-supply, irrigation and canals, drainage and embankments, water storage and water power (7).

NOTE.—Does not include water-supply schemes under the control of municipalities and other local bodies.

4. Inland waterways (31).

5 Construction and maintenance of buildings required solely for the administration of canals and embankments 6(*a*)..

6. Control of all officers serving in the Irrigation Branch of the Public Works Department (47).

Transferred Subjects.

MINISTER-IN-CHARGE—THE HON'BLE MINISTER FOR LOCAL SELF-GOVERNMENT.

7. Public works included under the following head :—

Light and feeder railways and extra municipal tramways in so far as provision for their construction and management is made by provincial legislation. [P. 6(*d*) and T..6(*d*)].

ROADS AND BUILDINGS BRANCH.

Central Subjects.

MEMBER-IN-CHARGE—THE HON'BLE MR. MCPHERSON.

1 Immovable property in the province acquired by and maintained at the cost of, the Governor-General in Council (44).

NOTE.—This item includes the construction and maintenance of civil and military buildings and other works on behalf of the Government of India..

MEMBER-IN-CHARGE—THE HON'BLE MR. SINHA.

2. Care of ancient monuments declared to be protected monuments under section 3(1) of the Ancient Monuments Preservation Act, 1904 (46)..

Reserved Subjects.

MEMBER-IN-CHARGE—HIS EXCELLENCY THE GOVERNOR.

3 The residences of His Excellency the Governor 6(*a*).

4. All questions arising under entry 9 in the district of Angul (36)..

MEMBER-IN-CHARGE—THE HON'BLE MR. MCPHERSON.

5. Electricity including the administration of Government electrical power plants and the supply of electric current therefrom [26(*c*)].

Mixed subjects and functions performed on behalf of all Departments of Government.

6. The disposal of vacant sites, being the property of Government, in the New Capital at Patna, and elsewhere.

7 The administrative charge of Government residences in the New Capital and at Ranchi.

8. The administrative charge of the Secretariat and Council Chambers at Patna and Ranchi.

Transferred Subjects.

MINISTER-IN-CHARGE—THE HON'BLE MINISTER FOR LOCAL SELF-GOVERNMENT.

9. Public Works included under the following heads :—

(*a*) Construction and maintenance of provincial buildings (other than the residences of His Excellency the Governor) save in so far as the work has been assigned by the Governor to the department using or requiring such buildings.

(*b*) Care of historical monuments with the exception of ancient monuments as defined in section 2(1) of the Ancient Monuments Preservation Act, 1904, which are for the time being declared to be protected monuments under section 3(1) of that Act [P. 6(*a*) and T. 6(*a*)].

(*c*) Roads, bridges, ferries, tunnels, ropeways, causeways and other means of communication [P. 6(*b*) and T. 6(*b*)].

10. Control of all officers serving in the Roads and Buildings Branch of the Public Works Department (47).

LEGISLATIVE DEPARTMENT.

MEMBER-IN-CHARGE—THE VICE-PRESIDENT OF THE EXECUTIVE COUNCIL.

Reserved Subjects.

1. Bye-elections for the Council of State, Legislative Assembly, and Legislative Council.

Mixed subjects and functions performed on behalf of all Departments of Government.

2. The initiation and drafting of bills for the codification and consolidation of the existing law and of formal legislation.

3. The drafting of all Government bills (other than those referred to in entry 2 above) in accordance with the instructions of the administrative Department.

4. The publication of bills before their introduction in the Legislative Council when such publication is ordered by the Governor.

5. All correspondence with the Government of India on the subject of Bills already introduced in the Legislative Council except letters treating of questions of principle or policy.

6. The transmission to the Government of India of copies of all bills introduced in the Legislative Council or Acts required under standing orders to be submitted.

7 The submission to the Governor-General of an authentic copy of each act for his assent, and the publication of that assent.

8. The printing of all bills introduced in the Legislative Council and the compilation of the opinions received regarding such bills.

9. The printing and reprinting of all Provincial Acts and the preparation and issue of annual lists showing the effects of legislation by the local legislature and of indexes to Acts of the local legislature.

MEMO. No. 438—446-A.R.

Ranchi, the 13th July 1923.

Copy forwarded to all departments of the Secretariat for information.

By order of the Governor in Council,

J. D. SIFTON,

Offg. Chief Secretary to Government.

APPENDIX IV.

The following is a list of the principal gazetted officers employed in the province :

(I) Executive Administration.

(a) The Government.

Governor	1
Members of the Executive Council and Ministers	4
Private Secretary to the Governor	1

(b) The Secretariat.

Chief Secretary to Government	1
Secretaries to Government	8
Under-Secretaries and Assistant Secretaries	7
Registrars	4

(c) The Board of Revenue.

Member	1
Secretary	1

(d) District Administration.

Commissioners	5
Magistrates and Collectors	23
Joint Magistrates and Deputy Collectors	20
Assistant Magistrates	33
Deputy Magistrates and Deputy Collectors	221
Sub-Deputy Collectors	142

(e) Various departments of Goverment.

(i) Police.

Inspector-General	1
Personal Asaistant to Inspector-General	1
Deputy Inspector-General	4
Superintendents	28
Assistant Superintendents	28
Deputy Superintendents	28

(ii) Education.

Director of Public Instruction	1
Assistant Director of Public Instruction	1
Vice-Chancellor of Patna University	1
Registrar, Patna University	1
Principals and Professors of Colleges	68
Inspectors and Inspectresses of Schools	8

(*iii*) Civil Hospitals.

Inspector-General	1
Civil Surgeons	21
Superintendent, European Mental Hospital	1
Deputy Superintendent, European Mental Hospital ...	1

(*iv*) Public Health Department.

Director	1
Superintending Engineer	1
Assistant Director	1

(*v*) Prisons Department.

Inspector-General	1
Superintendents of Central Jails	2

(*vi*) Forests Department.

Conservator	1
Deputy Conservators, Assistant Conservators and Extra Assistant Conservators	18

(*vii*) Agriculture Department.

Director	1

(*viii*) Industries Department.

Director	1
Deputy Director	1

(*ix*) Settlement Department.

Director of Land Records	1
Settlement Officers	3

(*x*) Excise Department and Registration Department.

Commissioner of Excise and Salt and Inspector-General of Registration.	1
(*a*) Excise Department.	
Deputy Commissioner	1
Superintendents	22
(*b*) Registration Department.	
Inspector of Registration Offices	1

(*xi*) Public Works Department.

Superintending Engineers	6
Executive Engineers	18

(*xii*) Co-operative Department.

Registrar, Co-operative Societies	1
Deputy Registrar	1

(*xiii*) Veterinary Department.

Director	1
Assistant Director	1
Deputy Director	1

(*f*) Miscellaneous officers under the Government of Bihar and Orissa.	
Political Agent and Commissioner, Orissa Feudatory States ...	1
Assistant Political Agent	1
Cantonment Magistrate	1
Superintendent, Government Printing	1
(*g*) Officers under the Government of India working in the province.	
Accountant-General	1
Deputy and Assistant Accountant-Generals	4
Postmaster-General	1
Deputy Postmaster-General	1
Commissioner of Income Tax	1
Officers of Income Tax	6
(II) Judicial Administration.	
Chief Justice...	1
Puisne Judges...	8*
Registrar, High Court	1
Government Advocate	1
Superintendent and Remembrancer of Legal Affairs ...	1
District and Sessions Judges	12
Sub-Judges	28
Munsifs	73

CHAPTER VI.

The Legislative Authority.

Up till 1912 the local legislative authority for the area that is now included in this province was the Bengal Legislative Council, which had been originally constituted in 1862 under the Indian Councils Act. Various changes had been introduced in the constitution of the Council by subsequent Acts, and as finally constituted in 1909 its maximum number of members was 50, of whom 26 were directly elected, and 24 nominated. Of the latter 19 might be officials. The Lieutenant-Governor was the President and the members of the Executive Council were also ex-officio members of the Legislative Council.

Bengal Legislative Council.

In 1912 the administrative changes announced by His Majesty the King Emperor at the Delhi Durbar and the formation thereby of the new province of Bihar and Orissa necessitated the formation of a new Legislative Council for the province. This was constituted under the Indian Councils Acts 1861-1909, as amended by the Government of India Act, 1912, and consisted of the following members :—

The Legislative Council of the Lieutenant-Governor of Bihar and Orissa.

(1) The Members of the Executive Council ex-officio	...	3 members.
(2) Elected members :—		
(*i*) By municipal commissioners	...	5 ,,
(*ii*) By district boards	...	5 ,,
(*iii*) By landholders	...	5 ,,
(*iv*) By the Muhammadan community	...	4 ,,
(*v*) By the mining community	...	1 member.
(*vi*) By the planting community	...	1 ,,
(3) Members nominated by the Lieutenant-Governor with the sanction of the Governor General, who should not exceed 19 in number and of whom not more than 15 should be officials	...	19 ,,
Total	...	43

In addition the Lieutenant-Governor was empowered with the sanction of the Governor-General to nominate one person, official or non-official, having expert knowledge connected with proposed or pending legislation, to be a member of Council. The term of office for an additional member was fixed at three years, provided that, where such additional members were officials or persons nominated as having expert knowledge, the term was three years or such shorter period as the Lieutenant-Governor might determine.

The Reforms Scheme.

By the declaration made by His Majesty's Government in 1917, the increasing association of the people of India with the work of Government and the gradual development of self-governing institutions with a view to the progressive realization of responsible government in British India as an integral part of the Empire were declared to be the aims of the British Government. The principles enunciated in this declaration were given effect to in the Government of India Act, 1919, which, however, was subsequently consolidated with the Government of India Act of 1915 to form the Government of India Act without date. This Act introduced the Reforms Scheme, and under section 46 Bihar and Orissa was declared to be a Governor's province on the 29th December 1920, and the new scheme of reforms was inaugurated from that date.

The Indian Legislature.

One of the objects of the Act was to revise the constitution and composition of the Provincial Legislative Councils, and to substitute for the old single chamber legislature of the Central Government a bicameral body known collectively as "the Indian Legislature", consisting of the Governor-General, an Upper House or "Council of State", and a lower house or "Legislative Assembly". Bihar and Orissa has one nominated and three elected members in the Council of State, and two nominated and twelve elected members in the Legislative Assembly. The duties of the Indian legislature are outside the scope of this book, but it may roughly be stated that it deals with the central subjects which have been referred to in the last chapter.

The Members of the Executive Council are ex-officio members of the Bihar and Orissa Legislative Council under section 72A of the Government of India Act but with this exception the composition of

the Council is laid down in the rules framed under the Act. It consists of seventy-six elected members, and such number of members nominated by the Governor as, with the addition of the members of the Executive Council, shall amount to twenty-seven. Of the members so nominated not more than eighteen shall be officials and nine shall be persons nominated to represent the classes or interests specified below :—

Composition of Bihar and Orissa Legislative Council.

(*i*) aborigines	2	members.
(*ii*) classes which are, in the opinion of the Governor, depressed classes	2	,,
(*iii*) industrial interests other than planting and mining	1	member.
(*iv*) the Bengali community domiciled in the province	1	,,
(*v*) the Anglo-Indian community	1	,,
(*vi*) the Indian Christian community	1	,,
(*vii*) the labouring classes	1	,,
Total ...	9	

For the election of the seventy-six elected members the province was divided up into 76 constituencies classified as follows :— 66 general constituencies, namely, 42 Non-Muhammadan rural, 15 Muhammadan rural, 6 Non-Muhammadan urban, and 3 Muhammadan urban. These general constituencies covered the whole geographical area of the province, each district forming one or more constituencies according to its size and population. There were also 10 special constituencies of which 5, corresponding to the 5 Commissioners' divisions, formed landholders' constituencies, while 2 special constituencies represented mining, 1 European, 1 planting and 1 university interests. In addition to the 103 members noted above two more persons may be nominated by the Governor as expert members for the purpose of any Bill introduced or proposed to be introduced in the Legislative Council.

The qualifications for a vote in a general constituency are broadly the status of a male resident British subject of not less than 21 years of age, of sufficient means to pay a certain minimum contribution to the public revenues. The Council, however, has power

to remove by resolution the sex disqualification and to grant the right of voting to women, but this power has not yet been exercised. The local Government has also the power to exempt from the disqualification of not being a British subject, rulers of States in India, or any subject or class of subjects of such States. In urban areas an assessment in respect of income tax of any amount, or of municipal tax amounting to Rs. 3 a year, or the possession within the constituency of any of the qualifications of a rural voter qualifies. In rural areas the liability to pay Rs. 12 cess by the proprietor of an estate or Rs. 100 by a tenure holder, and by a raiyat cess varying from Rs. 2 to 8 annas or rent varying from Rs. 16 to Rs. 8 forms the necessary qualification. Assessment of not less than Re. 1-8-0 under the Bengal Local Self-Government Act, 1885, or assessment in respect of income tax of any amount also qualifies a voter in rural areas. All retired, pensioned or discharged officers or soldiers of His Majesty's Army are qualified to vote. The regulations framed under the electoral rules provided for the preparation, publication, and revision of electoral rolls for each constituency. Provision is made for the identification of a voter before his vote is recorded. The counting of votes is done by returning officers who report the result of the election to the local Government.

The electorate and elections.

Candidates for election must belong to the male sex and must have had their names on the electoral roll and be proposed and seconded. A person is not qualified for election as a member if he is insolvent or has been convicted of certain criminal offences, or is under 25 years of age, while an official is also not qualified for election. The validity of elections can be challenged by election petitions, which are decided by specially constituted election tribunals appointed by the Governor. If in any case an election is declared void, a fresh election is ordered by the Governor.

Qualifications of candidates for elections.

The Provincial Legislative Council has power under the Government of India Act to make laws for the peace and good government of the province, and may repeal or amend as to the province any law made by any authority in British India, subject to the following restrictions.

Legislative powers of the Reformed Council.

The provisions of the Government of India Act conferring powers on the local legislature to make laws do not apply to the district of Angul, and only apply in a modified form to the Chota Nagpur Division, the district of Sambalpur and the district of the Santal Parganas. The extent of the disability of the Council to deal with matters relating to these districts is regulated by the Backward Tracts notification of the third of January 1921 which has been referred to in Chapter IV.

Backward tracts excluded.

The Legislative Council also may not, without the previous sanction of the Governor-General, make or take into consideration any law :—

Other restrictions.

(*a*) imposing or authorising the imposition of any new tax, unless the tax is a tax scheduled as exempted under the Scheduled Taxes Rules framed under section 129A of the Government of India Act; or

(*b*) affecting the public debt of India, or the customs duties, or any other tax or duty, other than a tax scheduled as aforesaid for the time being in force and imposed by the authority of the Governor General in Council for the general purposes of the Government of India;

(*c*) affecting the discipline or maintenance of any part of His Majesty's naval, military, or air forces; or

(*d*) affecting the relations of the Government with foreign Princes or States; or

(*e*) regulating any central subject of which a list is contained in the schedules of the Devolution Rules printed as an appendix to the last chapter,

(*f*) regulating any provincial subject declared under part II Schedule I of the Devolution Rules, to be, either in whole or in part, subject to legislation by the Indian legislature, in respect of any matter to which such declaration applies; or

(*g*) affecting any power expressly reserved to the Governor General in Council by any law for the time being in force; or

(*h*) altering or repealing the provisions of any law which, having been made before the commencement of the Government of India Act, 1919, by any authority in British India other than the local legislature, is declared by rules entitled the Local Legislature (Previous Sanction) Rules to be a law which cannot be replaced or altered by the local legislature without previous sanction; or

(*i*) altering or repealing any provision of any Act of the Indian legislature made after the commencement of the Government of India Act, 1919, which by its provisions may not be repealed or altered by the local legislature without previous sanction.

It is also not lawful for any member of the Legislative Council to introduce without the previous sanction of the Governor any measure affecting the public revenues of the province or imposing any charge on that revenue. The Governor has power also to stop all further proceedings in regard to any bill or any clause or amendment of a bill, on the ground that it affects the safety of the province or another province.

Powers of the Governor with regard to legislation.

Except in the case of a bill reserved for consideration by the Governor General, the assent of the Governor is necessary in all cases after a bill has been passed in the Council, and the Governor may return a bill for reconsideration. He is bound to reserve such bills for the consideration of the Governor-General as affect the religion or religious rights of any class of British subjects, the constitution or function of universities, the construction of light railways, or which have the effect of extending the range of transferred subjects, or which contain provisions relating to the assessment of land revenue or which are likely seriously to affect the public revenues of the province. A bill so reserved becomes law on receiving the assent of the Governor General within six months from the date of reservation. When the Governor himself assents to a bill, it becomes an Act, but it requires the assent of the Governor General in order to have validity. The Governor has also power in any emergency to override the Legislative Council's refusal either to give leave to introduce or to pass a bill on a reserved subject in the

form recommended by him. If the passage of such a bill is certified by the Governor to be essential for the discharge of his responsibility, the bill is deemed to have been passed, but has no effect until it has received the assent of His Majesty in Council, unless the Governor General himself signifies his assent thereto on the ground that a state of emergency exists, in which case it has effect at once, subject however to disallowance by His Majesty in Council. An Act made by the Governor in the exercise of these powers is required to be laid before each House of Parliament, and may not be presented for His Majesty's assent, where such assent is required, until it has been laid before each House for not less than eight days.

Budget control.

The extent of the Council's control over finance and the budget has already been considered in the previous chapter.

Sessions and duration of the Legislative Council.

Section 72B of the Government of India Act empowers the Governor to appoint the time and place for a session of the Legislative Council and to prorogue the Council. A Council ordinarily continues for three years from its first meeting, but may be sooner dissolved by the Governor. On the expiration or dissolution of a Council, a general election is held in order that a new Council may be constituted.

Admission of members and vacation of seats.

Every person who is elected or nominated to be a member of the Council is required before taking his seat to make an oath or affirmation of his allegiance to the Crown. If any person having been elected or nominated to be a member subsequently becomes subject to any of the disabilities stated in the electoral rules which would disqualify him for election or nomination to the Council, or fails to make the prescribed oath or affirmation within such time as the Governor considers reasonable, the Governor has power to declare his seat to be vacant. If for a period of two consecutive months a member is absent from India or is unable to attend to the duties of his office, the Governor may declare his seat to be vacant. A member may resign his office to the Governor and on the acceptance of the resignation, the seat becomes vacant. A non-official member vacates his seat by the acceptance of office under the Crown. A Minister is not, however, deemed to be an official for this purpose.

The President of the Council is for the first four years appointed by the Governor, and shall hereafter be a member of the Council elected by the Council and approved by the Governor. For the first five sessions of the Council the Governor appointed an official as President, but at the conclusion of the fifth session an elected member, who had already been chosen by the Council as their Deputy President, was appointed by the Governor to be President. At the beginning of the first session of the Council after a general election, the Council elects one of its members to be Deputy President of the Council. The election, however, is subject to the approval of the Governor. During every session the President nominates from amongst the members of the Council a panel of not more than four chairmen, any one of whom may preside, over the Council in the absence of the President and the Deputy President.

President.

Deputy President.

Panel of chairmen.

The procedure of the Legislative Council is regulated by rules and standing orders. The rules, entitled the Bihar and Orissa Legislative Council Rules, 1920, were made under section 72D (5) read with section 129A of the Government of India Act by the Governor General in Council, with the sanction of the Secretary of State in Council, in the form approved by both the Houses of Parliament. They cannot be amended by the Indian or by the local legislature. The standing orders, entitled the Bihar and Orissa Legislative Council Standing Orders, were made by the Governor in Council under section 72D (6) of the Government of India Act, and they can be amended by the Legislative Council after leave to do so has been given by the Council on a motion which must be supported by at least 25 members, and after the proposed amendments have been referred to a select committee elected by the Council, of which the President and the Deputy President are required to be members.

Rules and standing orders.

The Governor allots days for the business of non-official members of the Council, and on these days such business has precedence. At all other times Government business has precedence. The presence of at least 25 members is necessary to constitute a meeting of the Council for the exercise of

General rules of procedure.

its powers. There is freedom of speech in the Legislative Council, and no person is liable to any proceedings in any court by reason of his speech or vote in the Council, or by reason of anything contained in any official report of the proceedings of the Council. The matter of every speech must, however, be relevant to the matter before the Council. A member also must not refer to any matter of fact on which a judicial decision is pending, nor make a personal charge against a member, nor use any offensive expression regarding the conduct of the Indian or any local legislature. He must not reflect upon the personal conduct of His Majesty the King, or the Governor General, or any Governor, or any court of law in the exercise of its judicial functions. He must not utter treasonable, seditious or defamatory words, nor use his right of speech for the purpose of wilfully and persistently obstructing the business of the Council. The business of the Council is transacted in English, but any member who is not fluent in English may address the Council in any recognized vernacular of the province.

A matter requiring the decision of the Council can be brought forward by means of a question put by the President on a motion proposed by a member. All questions in the Council are determined by a majority of votes of the members present, other than the person presiding, who exercises a casting vote in the case of an equality of votes. Motions for closure cannot be carried unless supported by at least two-thirds of the members present and voting. The President has the right to decide on all points of order and his decision is final. He has power to direct the withdrawal from the Council of any member whose conduct is in his opinion grossly disorderly. He may in the case of grave disorder arising in the Council suspend any sitting for a time to be named by him.

Questions.

The first half hour of every meeting is available for the asking and answering of questions, for which ten clear days' notice is necessary. Questions may be asked for the purpose of obtaining information on a matter of public concern, and may be disallowed by the President if they relate to a matter which is not primarily the concern of the local Government. No questions can be asked in regard to any of the following subjects:—

(*i*) Any matter affecting the relations of His Majesty's Government, or of the Government of India, or of

the Governor or the Governor in Council, with any foreign state:

(*ii*) any matter affecting the relations of any of the foregoing authorities with any Prince or Chief under the suzerainty of His Majesty, or relating to the affairs of any such Prince or Chief, or to the administration of the territory of any such Prince or Chief; and

(*iii*) any matter which is under adjudication by a Court of Law having jurisdiction in any part of His Majesty's Dominions.

In order that a question may be admissible it shall not bring in any irrelevant name or statement, or contain arguments, inferences or defamatory statements, or ask for an expression of an opinion, or impugn the private character or conduct of any person or be of excessive length. Any member may put supplementary questions for the purpose of further elucidating any matter of fact regarding which an answer has been given. A notification issued under section 52A (2) of the Government of India Act bars the discussion of any subject relating to Angul and the asking of questions relating to Angul, save with the sanction of the Governor.

Resolutions.

Subject to rules and standing orders the President decides on the admissibility of resolutions, for which 15 clear days' notice is necessary. The Governor may disallow any resolution on the ground that it cannot be moved without detriment to the public intrest or on the ground that it relates to a matter which is not primarily the concern of the local Government. Every resolution is required to be in the form of a specific recommendation addressed to the Government, and no resolution can be moved on any subject on which questions cannot be asked. No resolution is admissible which is not clearly and precisely expressed, or which contains arguments, inferences or defamatory statements, or refers to the private conduct or character of persons. When a resolution has been moved no resolution or amendment raising substantially the same question can be moved within one year. Resolutions are recommendations only and have no binding force, and Government is at liberty to act on them or not as it wishes. They are, however, the authoritative recommendations of a representative body, and as such are bound to carry weight.

A motion for an adjournment of the business of the Council for the purpose of discussing a definite matter of urgent public importance may be made with the consent of the President, subject to certain restrictions. The Governor has power, notwithstanding the consent of the President, to disallow any motion for adjournment on the ground that it cannot be moved without detriment to the public interest or on the ground that it relates to a matter which is not primarily the concern of the local Government. If the Governor so disallows such a motion, an adjournment cannot be permitted by the President and no further discussion of the motion can take place. Leave to move an adjournment cannot, if any member objects, be granted unless at least 20 members rise in support of it. Notice of a motion must be given before the proceedings of the day are commenced. If leave is granted the President intimates that the motion will be taken up at 4 p.m. If the debate is not concluded by 6 p.m. it ends automatically and no question is put. The motion can be made only in regard to matters which under rules and standing orders can be the subject of a resolution.

Motions for adjournment for purposes of debates.

Legislation is initiated by a motion made in Council for leave to introduce a bill, unless the Governor has previously ordered the publication of the bill together with the statement of objects and reasons. When a bill is introduced, one of the following motions is made :—

Legislation.

(*a*) that it be taken into consideration by the Council either at once or on some further day; or

(*b*) that it be referred to a select committee composed of members of the Council; or

(*c*) that if it be circulated for the purpose of eliciting opinion thereon.

When a bill is referred to a select committee, the committee examines the bill clause by clause, and the bill is revised so as to bring it into conformity with the recommendations of majority of the members. The committee prepares a report on the bill which is presented to the Council by the member-in-charge. After the presentation of the final report of the select committee a motion may be made by the member-in-charge of the bill;

(*a*) that the bill as reported by the select committee be taken into consideration;

(b) that the bill as reported by the select committee be recommitted; or

(c) that the bill as reported by the select committee be recirculated for the purpose of obtaining further opinion.

If the member in charge of the bill moves that it be taken into consideration any member may move as an amendment that the bill be reconsidered or recirculated for the purpose of obtaining further opinion.

When a motion has been agreed to by the Council that the bill be taken into consideration, a member may propose any amendment of the bill. When the amendments are disposed of, a motion is made that the bill be passed. But if any amendment of the bill is made, any member may object to any motion being made on the same day that the bill be passed, and a motion that the bill be passed may be brought forward on any future day. When a bill is passed by the Council, the secretary makes such formal corrections as may be necessary and submits a copy to the President for his signature. When the bill has been signed by the President, the Secretary submits it to the Governor for his assent. A member who has introduced a bill may at any stage move that it be withdrawn.

A statement of the estimated annual expenditure and revenue of the province called the budget is presented to the Council on such date as the Governor may appoint. The budget is presented in such form as the Finance Member may consider best fitted for the consideration of the Council, but each demand must contain a statement of the total grant proposed and a statement of the detailed estimate under the grant proposed by each department of the Government; and demands affecting reserved and transferred subjects are required as far as possible to be kept distinct. The budget is dealt with by the Council in two stages. The first is a general discussion for such time as may be allotted by the Governor, during which the Council may discuss the budget as a whole, or any question of principle involved in it. The second stage is the voting of grants, for which not more than 12 days may be allotted by the Governor. Of the days so allotted not more than 2 may be allotted to the discussion of any one demand. When the maximum limit of time for discussion is reached the President is required to put forthwith

Financial business.

every question necessary to dispose of the demand under discussion. On the last of the allotted days, at 5 o'clock, the President is required to put every question necessary to dispose of all outstanding matters in connection with the demands for grants. Any member may, after giving 7 days' notice, move for the reduction or omission of any item of any grant or the whole grant, but not to increase or alter the destination of a grant. No motion for appropriation can be made except on a recommendation of the Governor communicated to the Council.

An estimate is presented to the Council for a supplementary or additional grant, when the amount voted in the budget is found to be insufficient for the purposes of the current year; or, when need arises during the current year for expenditure for which the vote of the Council is necessary upon some new service not contemplated in the budget for that year. A demand for an excess grant is made when money has been paid in excess of that granted by the Council. Supplementary and additional estimates, and demands for excess grants are dealt with in the same way as if they were demands for grants.

Communications to and from the Governor.

Communications from the Council to the Governor are made—

(1) by formal address, after motion made and carried in the Council; and

(2) through the President.

Communications from the Governor to the Council may be made—

(*i*) by a speech of the Governor when the Governor has required the attendance of the members, under section 72A(1) of the Government of India Act,

(*ii*) by a written message delivered to the President by a Member of the Government and read to the Council by the President;

(*iii*) informally through a member of the Government.

Relations with the Central Government.

The province in common with the rest of British India is subject to the legislative authority of the Indian Legislature, and to the power of the Governor General under section 72 of the Government of India Act, which may be exercised in the case of emergency, to legislate by means of ordinances. The

Governor General has also power on the proposal of the local Government to make regulations under section 71 of that Act for any part of the province, to which the section may be applied by a resolution of the Secretary of State in Council. The latter section has at present only been applied to backward tracts, such as the districts of Angul and the Santal Parganas. Lastly, Parliament retains powers to legislate for Bihar and Orissa in common with other British possessions.

CHAPTER VII.

Character of Land Revenue Tenures and Tenancy Laws.

Section I.—Character of Land Tenures.

The East India Company succeeded to the Dewani or financial administration of Bengal, Bihar and Orissa in the year 1765, but it was not until 1772, on the dismissal of Mahomed Reza Khan, the naib dewan, that they assumed, by the agency of their own servants, the direct management of the revenues. The grant of the Dewani was the grant of the right to collect the revenue of the three provinces, and to exercise jurisdiction in civil and financial or revenue cases. It was subject to the payment of a fixed yearly stipend of twenty-six lakhs of rupees to the Emperor of Delhi, and to defraying the expenses of the administration of criminal justice and of police. For some years the revenue was collected on the old Mughal system. The zamindars or Government farmers were recognised as having a right to collect the revenue from the actual cultivators. But on principle of assessment existed, and, with the single exception of a five-year settlement introduced by Warren Hastings in 1772, the revenue was in general adjusted from year to year. The decennial settlement of Lord Cornwallis was commenced in 1789 and completed in 1791. No attempt was made to measure the fields or calculate the outturn and the amount to be paid in the future was fixed by reference to what had been paid in the past. At first the settlement was called decennial, but in 1793 it was declared permanent for ever. It was confined to the three provinces of Bengal, Bihar and Orissa, according to their boundaries at that time. By the term Orissa was meant only the tract of country lying between the Rupnarayan and Subarnarekha rivers, and now included in the district of Midnapur. The greater part of Orissa proper, which was conquered from the Marathas in 1803, is still subject to a temporary settlement. The permanent settlement embraced, roughly speaking, so far as this province is concerned, the tracts of country now comprised in the Patna, Tirhut and

Permanent Settlement, 1793.

Bhagalpur divisions. It also comprised parts of the Hazaribagh and Manbhum districts and a few estates in Singhbhum and Ranchi in the Chota Nagpur division.

Resumption proceedings.

At the time of the permanent settlement large areas were claimed to be held revenue-free, and the authority to scrutinize such revenue-free grants, and if invalid, to annex them, was specially reserved. They were divided into 2 classes—badshahi and hukumi; the former being those that were granted by the Mughal Emperor direct, and the latter by the officials of the Emperor. Regulation XXXVII of 1793 dealt with badshahi grants and Regulation XIX of the same year with the others. Badshahi grants were recognised as valid (*bahali*) if the holder could prove his sanad as hereditary and was in possession. Hukumi grants, though in their nature invalid, were accepted as valid if dated prior to 1765. All grants of a subsequent date were invalid and were resumed (*bazyafti*), but those given between 1765 and 1790 were to be accorded a privileged rate of assessment. By Regulation XIX all lakhiraj grants by zamindars after 1790 were invalidated, and zamindars were authorised to nullify their own grants.

No practical steps were taken when these Regulations were passed, but in 1800 an attempt was made to introduce the compulsory registration of lakhiraj grants in registry offices. The attempt proved abortive, and in 1819 Regulation II of that year was passed, the principal provision of which transferred the power of resumption from the civil to the revenue courts. Another Regulation, III of 1828, appointed an executive agency, in the person of a special Commissioner, to give practical effect to the policy of Government, and it was under his guidance that resumption proceedings were systematically undertaken between the years 1830 and 1850. By these means some thousands of estates were added to the revenue-roll. The jurisdiction in resumption cases has since been again transferred to the civil courts by Act VIII of 1869, and the question has been further set at rest by the Limitation Law (Act XV of 1877) which expressly gives a limit of 60 years in the case of suits instituted by the Secretary of State.

The temporarily-settled tracts consist chiefly of territories acquired subsequent to the Permanent Settlement. Among these

may be mentioned Orissa (already noticed) ceded by the Marathas in 1803, the Khurda estate, comprising nearly half of the district of Puri, confiscated in 1804, the Palamau estate resumed in 1818, and the Banki and Angul estates confiscated in 1839 and 1847 respectively. Besides the above, many scattered estates which have become the property of Government by purchase at revenue sales or by alluvial accretion, are settled for terms fixed by Government.

Temporarily settled tracts.

The zamindars, with whom the settlement was originally made, were for the most part powerful men, whose authority extended over wide tracts of country and to whom police and other powers were entrusted. The settlement gave them the status of proprietors of these tracts, with rights of transfer and inheritance, subject only to the payment, in perpetuity, of a revenue charge. In default of due payment, their lands were to be sold to the highest bidder. Whilst the claim of Government against the zamindars was thus fixed for ever, the law intended that the rights of the zamindars over their tenants should be equitably restricted though no detailed record of tenant-right was inserted in the settlement papers. The rights of the landlord as against the State were defined by the Regulations of 1793; the rights of the tenants as against the landlord were reserved but were not defined. Though important privileges were conceded to the zamindar, it was not intended that he should have the power of setting aside existing subordinate rights; it was taken for granted that the law courts would afford sufficient protection to the latter, and it was intended that all tenures should be registered. One result of the permanent settlement was that under the influence of debt and mismanagement large zamindaris were speedily broken up. The Government demand was then one which left but a small margin of profit, as compared with that enjoyed by zamindars in modern days. The rights of the raiyat to hold at customary rates were secured by law, and the power of the zamindars over them was limited. While regular payment of the revenue, without remissions, was insisted on by Government, the zamindars had no legal means of enforcing payments from their tenants with the same rigid punctuality. Consequently there was a widespread default in the payment of the Government dues, and extensive sales

Status of zamindars.

of estates, or parts of estates for recovery of arrears. The result was that a good many estates were alienated and a host of small zamindars were ruined; and within the ten years which immediately followed the permanent settlement, a great change took place in the constitution and ownership of the estates which formed the subject of that settlement.

In order to facilitate the collection of the Government revenue, the zamindars in 1799 were invested with greater powers for recovering rents from the raiyats, and these powers were increased in 1812, so that since then they were exercising an authority over the raiyats far greater than that given them by the original settlement of 1793.

How the legislature in later years extended its protection to the raiyats by the enactment of Act X of 1859, the Bengal Tenancy Act, VIII of 1885, and its subsequent amendments, the Chota Nagpur Tenancy Act, VI of 1908, and the Orissa Tenancy Act II of 1913, will be described in a later portion of this chapter.

Development of the Government revenue.

Since the permanent settlement a large addition to the revenue occurred when the province of Orissa was conquered from the Marathas in 1803, and the Khurda estate in Puri was confiscated in 1804, while the resumption of the Palamau estate in 1818 also increased it to some extent. Some additions were also made when the zamindars were relieved of police charges. After this the revenue expanded by the confiscation of the estates of Banki (1839) and Angul (1847), by the re-settlement of Orissa (1837) and by the resumption, under Regulation II of 1819, of invalid revenue-free tenures. But the Orissa famine of 1866, which caused a postponement of the re-settlement of that province, checked further expansion. Since then a large increase has resulted from the re-settlement of the temporarily-settled area in Orissa (1897), and of the Government estates of the Kolhan, Palamau, Khurda, Angul, Banki, etc. At the end of 1921-22 the revenue demand of the province stood at Rs. 1,52,83,168 as compared with Rs. 1,50,05,919 in the year 1911-12. A further increase of revenue is expected to result from the Orissa re-settlement which has recently been begun.

The number of estates on the Government revenue roll has largely increased since the permanent settlement—first, by the admission to the roll, of talukdars who were successful in the

claims preferred by them to hold their taluks independently of the zamindars through whom they had previously paid their revenue; and, secondly, by partitions of estates. The operation of the Mitakshara law of property by which sons have equal rights to the ancestral property with the father, had full play under the petty Hindu chiefs who held most of Tirhut up to the middle of the 16th century, and met apparently with no discouragement under the Muhammadan rule that followed, the administrative difficulties being surmounted by the appointment of sadar zamindars or farmers. The result, therefore, was that at the time of the permanent settlement, Collectors were confronted with a host of petty proprietors, with each of whom the settlement was to be made in perpetuity. Articles VIII and IX of Regulation I of 1793 recognized the principle of partition, and Regulation XXV of 1793 was passed authorising zamindars to apply to the Collector for this purpose. Advantage does not appear to have been largely taken of the regulations at first, and it is clear that private partitions went on extensively and were informally recognised. It was then realised as essential that only partitions made through the Collector should be recognised, and subsequent operations of the Sale Law showed proprietors that their safest course lay in applying to the Collector for the division of their estates. Moreover, the administrative evils arising from unrestricted partition had already begun to make themselves felt, and various regulations and acts were passed restricting the right to partition and providing for greater rapidity in the disposal of partitions. The last Partition Act, Act V of 1897, fixed a limit of Rs. 10, below which amount of land revenue no estate could be partitioned; it provided for a more speedy disposal of partition cases and rendered it compulsory for a partition to be based on a survey and record of rights. As a result of the partition law, every partition has added one or more estates to the number on the roll, and a large portion of the estates so added have been registered under new names; the large majority of these partitions have been effected in the Tirhut Patna and Bhagalpur divisions.

Variations of revenue roll.

Partitions.

Even the present Partition Act affords many opportunities for obstruction and delays by recalcitrant parties, and in some districts. Repeated subdivision has rendered it impossible to form new estates

of compact area. To remedy this an amendment of the Partition Act was contemplated at one time, but this has been postponed until the Land Registration Act has undergone revision. The result of these frequent partitions has been a transformation of the revenue-roll so complete that in most districts it is almost impossible to establish the points of identity between the list of 1793 and that of the present day.

The following statement shows the increase in the number of estates in the Patna and Tirhut divisions, and the Monghyr and Bhagalpur districts of the Bhagalpur division, during the 59 years ending 1921-22 :—

Districts.	Number of estates.					
	1862-63	1882-83.	1892-93.	1901-02.	1911-12.	1921-22.
1	2	3	4	5	6	7
Patna	5,015	8,182	10,322	12,814	13,649	15,707
Gaya	4,936	5,595	6,121	7,674	8,430	9,950
Shahabad	4,186	5,912	7,607	9,922	10,717	12,406
Saran	4,183	5,225	6,042	6,688	7,440	8,451
Champaran ...						
Muzaffarpur ...	7,521	23,581	30,447	34,172	37,515	39,801
Darbhanga ...						
Total	25,841	48,495	60,539	71,270	77,751	86,315
Monghyr	3,539	5,732	7,118	7,901	8,452	9,219
Bhagalpur	3,594	4,210	4,585	4,741	4,800	4,948
Total	7,133	9,942	11,703	12,642	13,252	14,167

The above statistics clearly show that the rapid subdivision of estates by partition in Bihar still continues. In the districts of the Patna division the number of estates has been nearly trebled, while in the districts of Muzaffarpur and Darbhanga the number of estates

has increased four times. The total number of estates in all districts of the province except Sambalpur, at the end of 1911-12, was 101,662 while the total number of estates including Sambalpur, at the end of 1921-22, was 113,435.

Classification of estates.

Estates are now classified into three classes.

Class I, permanently-settled estates, which includes, all estates so settled whether—

(1) estates settled from the date of the decennial settlement;

(2) resumed revenue-free estates settled in perpetuity;

(3) estates formerly the property of Government, the proprietary right in which has been sold to private persons, subject to a revenue fixed in perpetuity;

(4) estates once the property of Government, the proprietary right in which has been sold to private persons, subject to a revenue liable to periodical revision.

Class II, temporarily-settled estates, which includes—

(1) those settled for periods with the proprietors;

(2) private estates leased to farmers for periods;

(3) Government estates leased to farmers for periods.

Class III, estates held direct by Government which includes—

(1) those managed for proprietors;

(2) those owned by Government as proprietor.

Realization of permanently-settled revenue.

The revenue of the permanently-settled estates has been realized with great punctuality. Losses sometimes occur through famine, epidemics, the devastations of cyclones, and other natural calamities; but, under the conditions of settlement, no pleas based on such events can be urged as excuses for non-payment, and, as a rule, the large excess of the annual rental over the Government demand enables the present landholders to meet that demand even in the most disastrous years. When, however, a land-owner cannot pay, the estate comes to sale for arrears, and then it depends upon its actual value in the market, whether the price realized will cover the amount due to Government. If the debt be not cleared off, the defaulter is liable to other processes for the recovery of the remainder, which, however, is seldom effected, and small losses to Govrnment occur from time

to time in this way. In other cases estates, usually small ones, come to sale for arrears owing to raiyats deserting or in consequence of diluvion, and sometimes in consequence of fraudulent transfers of land, and no bidders are found for them. These have to be bought in by Government, and settled to the best advantage by the revenue authorities. Many almost valueless estates come in this way into the hands of Government. Some are settled permanently or temporarily, at a revenue far below that which they originally bore on the revenue-roll; others, after all attempts at settlement have failed, are sold to the highest bidders revenue-free. In this way Government has frequently suffered losses of permanently-settled revenue, but these losses are comparatively insignificant and are more than made up for by accessions from freshly assessed alluvion and the periodical re-settlement of Government estates at a higher revenue than that which they originally bore. It would also seem proper, in estimating the gains to be set off against the losses already noted, to take into account the annual value of the capital sums which have been realized by the sale of Government estates, such sums representing the market value at the time of sale of the prospective proprietary profits from the estates so sold.

After the permanent settlement of 1793 the practice was for many years to dispose in perpetuity of lands which came into the hands of the Government on a zamindari title. Towards the end of the first quarter of the last century a change of policy in this respect took place, and in their despatch of the 18th February 1824, the Court of Directors stated with regard to the question of disposing of khas mahals in perpetuity, that "it was a measure with respect to which we have had occasion frequently to express disapprobation which we trust we shall not have occasion to repeat." Again, in their despatch of the 10th November of the same year, the Court of Directors remarked "we are satisfied generally with your declaration that under the present orders you will not authorise the sale or permanent settlement of any mahals the property of Government, unless under circumstances of a nature, utterly to forbid the hope of successful management through any other arrangement."

Government estates.

These orders seem to have remained in force for more than a quarter of a century, but in 1859 the Government of India under

the pressure of financial difficulties produced by the Mutiny proposed to the Government of Bengal "to sell all estates in which the right of the Government could be advantageously or unobjectionably disposed of," and the sale of estates under certain conditions was again sanctioned. Subsequently various changes of policy were introduced regarding the types of estate to be sold or kept under direct management and as to the terms on which estates should be sold. These changes have been fully detailed in the report for 1911-12.

Direct management now The rule.

The present policy is that as many estates should be kept under direct management as possible, so that the revenue authorities may be enabled to obtain continuous practical information of the progress of agriculture, of the extent to which the productive powers of the land are being developed and of the increased money value of the produce. Estates are always retained under direct management if they are, or are likely to become, of sufficient extent to support a tahsildari establishment of their own, or if they are so situated as to be capable of being incorporated with some other Government estate or to admit of easy supervision from the headquarters of a district or subdivision.

Instances sometimes occur in which it is not convenient to hold an estate khas, but in which the interests of Government are better secured by a settlement than by a sale, and in these cases the procedure followed is a settlement for a long term of years with head raiyats or respectable residents, or failing that, with a farmer. Farming leases are however only granted if direct management is impracticable or distinctly disadvantageous to Government, and if the rights, rents and position of the cultivating tenants have been fully safeguarded against the risk of oppression by a farmer.

Record and Registration of estates.

A primary object of the authors of the permanent settlement was to record all rights in the land. Regulation XLVIII of 1793 prescribed the preparation of a general register of estates, to be arranged in alphabtical order, and also directed that a register of intermediate mutations should also be kept up in the manner therein detailed. The intention was that every fifth year the general register should be re-written and all the mutations

entered intermediately in the mutation register embodied in it. In fact, however, the registers were never kept up in such a manner as to be really useful in any district in Bengal. Practically, before the year 1876 there was no obligation enforced on zamindars to register transfers of their estates; registration was only effected whenever it suited the parties to observe the law, and the penalty for disobedience prescribed by the law was never in fact enforced. The registers did not explain who the zamindars were, and they furnished no information at all of under-holders or raiyats. As a partial remedy for this evil, the registers of the returns of estates and tenures for purposes of valuation under the Road Cess Act of 1871 afforded valuable information as the basis for the preparation of fresh general and pargana registers in nearly all the districts of Bengal. But the question of keeping and maintaining a complete record of possessory titles in landed estates was not taken up till the year 1875, when a Bill was introduced in the Bengal Legislative Council to provide for the compulsory registration of such titles, and was passed into law [Act VII (B.C.) of 1876] in July 1876. This law requires the registration of all lands, whether revenue-paying or revenue-free; and every person in possession, as owner or manager, of such lands, or of any share in such lands, is required within a certain period, and under heavy penalties, to register full particulars of the property in his possession. Registration is optional only in the case of those who, though not in possession as owners, have a lien on the proprietary right as mortgagees. The Act has been extended to all districts except Angul and Sambalpur, the latter of which was transferred from the Central Provinces to the Orissa division in 1905. In this district (Sambalpur) mutations of proprietary tenures are registered under the Central Provinces Land Revenue Act, XVIII of 1881, and the rules framed thereunder.

The object of the Land Registration Act is not to make an inquisition into titles, but to identify all individuals on whom the legislature has imposed certain duties and the fulfilment of certain obligations in virtue of their being in possession of land as proprietors. The Land Registration registers account for every acre of land in the district. The work is now complete in all districts. No important amendments in the Land Registration Act have been made during the last decade. The general question of the adequacy

or otherwise of the present system of Land Registration in the province has however been carefully considered, though as yet no definite decision has been reached.

By the Regulations of 1793 all zamindars were required to maintain *patwaris* to keep the accounts of the raiyats. The functions of the *kanungo*, who was appointed by Government, were to keep the public accounts, and to receive the returns and registers of the zamindars and other local officers who collected the public revenue. The *kanungo* was appointed for each estate or pargana, and was required to compile information regarding articles of produce, rates of rent, transfers of holdings, rules and customs established in each pargana, and to assist in measurements of lands. The *patwari* occupied the lower grade in the local agency, and performed the duties of a village accountant. He was required to keep accounts relating to lands, produce, collections and charges. The *kanungos* were district registrars, the *patwaris* were official village accountants. Both these classes of officials were intended to serve as a check on the landlords. English ideas of the rights of a landlord, and of the advantages of non-interference, afterwards began to prevail. The executive more and more abrogated the functions of recording rights and protecting the inferior holders, and left everything to the judicial tribunals. The *patwaris* fell into disuse, or became the mere servants of the zamindars, and, along with the *kanungos*, whose office had long become little more than a name, were abolished by Lord Cornwallis. Subsequently, however, various attempts were made to revive the system but these met generally with little support and less success. At the present time *kanungos* exist only in Orissa, and though in some districts the appointment and dismissal of *patwaris* is still subject to the control of the revenue authorities, the control is nominal and such *patwaris* as exist are solely the servants of the zamindars for whom they work.

Kanungos and Patwaris.

The passing of the Bengal Tenancy Act in 1885 provided for the first time a procedure for obtaining in a complete form a record of the rights in land. This Act is still in force in Bihar and a similar provision has been inserted in the Chota Nagpur and Orissa Tenancy Acts. A record-of-rights has been prepared for all the Bihar districts under the Bengal Tenancy Act, and has been revised in

Record-of-rights.

Champaran and Saran. A record has also been prepared in the Santal Parganas under the regulations in force in that district, and its revision has just been started. In Chota Nagpur the record-of-rights has been completed in the districts of Singhbhum, Ranchi, Hazaribagh and Palamau, and is under preparation in Manbhum. The settlement of the whole division will then have been completed. In Orissa a record-of-rights exists except for certain permanently-settled estates in Balasore, Cuttack and Puri, and for the Khondmals subdivision of Angul. A revision of the record has been taken up in the three coast districts in connection with the land revenue settlement, and in the course of these operations a record will be prepared for the estates in which there is none now. This settlement is being made under the Orissa Tenancy Act. In Sambalpur there have been serveral settlements and the record is maintained under the Central Provinces system. A resettlement of land revenue and revision of the record is at present in progress.

Security of the revenue.

The security of the land revenue depends upon the operation of the Sale Law. It was apprehended that the proprietor of an estate from improvidence, ignorance or with a view to raise money, might be induced to lessen his own receipts by granting leases at reduced rates to tenure-holders or raiyats, and so occasion a permanent diminution of the Government revenue in the event of the reduced receipts of the proprietor proving insufficient to defray the Government demand and of the estate being brought to sale in consequence. In view of this danger, it was thought well to provide that when an estate was sold for arrears of its own revenue all incumbrances should be avoided, all leases cancelled, and the estate handed over to the new proprietor in the same condition in which it was at the time of the permanent settlement. It was accordingly enacted in the Regulation of 1793, that on a sale for arrears of revenue all engagements subsisting between the proprietors and their dependent talukdars, farmers and raiyats, on account of such lands, should, with certain exceptions, be null and void. The law on the subject has been re-enacted in the present Sale Law, Act XI of 1859, the exceptions being :—

(1) istimrari or mukarrari tenures, which have been held at a fixed rent from the time of the permanent settlement;

(2) tenures existing at the time of settlement, which have not been held at a fixed rent; provided that the rents of such tenures shall be liable to enhancement under any law for the time being in force for the enhancement of the rent of such tenures;

(3) talukdari and other similar tenures created since the time of settlement and held immediately by the proprietors of estates, and farms for terms of years so held, when such tenures and farms have been duly registered under the provisions of this Act;

Sale Law.

(4) Leases of lands whereon dwelling-houses, factories, or other permanent buildings have been erected, or whereon gardens, plantations, tanks, wells, canals, places of worship, or burning or burying grounds have been made, or wherein mines have been sunk.

The proviso to section 37 also completely protects against ejectment and arbitary enhancement of rent all raiyats having a right of occupancy at a fixed rent or at a rent assessable according to fixed rules under the laws in force. Amendments have been made in this Act by the Decentralization Act of 1914, by which certain powers previously exercised by the Local Government and the Board of Revenue, are now exercised by the Board and the Commissioner respectively.

The average annual number of whole estates and shares which became liable to sale in the area which now comprises this province, during the ten years ending 1912-13, was 8,300, of which 427 or only 5·1 per cent. were actually sold. The average annual number which became liable to sale in the nine succeeding years was 8,995, of which 387 or only 4·3 per cent. were actually sold. It is thus apparent from the Sale Law is not worked with any undue severity. The effects of the land registration proceedings are apparent in the great number of applications made under the protective clauses of the Sale Law. The opening of a separate account is now an easier matter than it was when title and possession could be readily questioned, and a stop thus put to further proceedings. Under Act XI of 1859, shareholders and sub-shareholders are permitted, under certain conditions, to obtain separate registry, so as to protect themselves from the effect of a sale due to the default of others. The following statement shows the number of separate accounts opened under various sections of the law during the ten years

ending 1912-13, and the corresponding figures for the nine years ending 1921-22 :—

—	Number of separate accounts opened under section 10 of Act XI of 1859.	Number of separate accounts opened under section 11 of Act XI of 1859.	Number of separate accounts opened under section 70 of Act VII (B.C.) of 1876.
For the ten years ending 1912-13 ...	15,901	765	7,335
For the nine years ending 1921-22 ...	13,356	988	5,065

The protection these provisions of the law afford to tenure-holders, and the check they introduce on attempts by zamindars to utilise the Sale Law as a means for obtaining an enhancement of rent, are much lessened through the period of limitation laid down by section 2 of Act III (B.C.) of 1862.

The classes of private estates which may be legally brought under the Court of Wards are as follows :—

Wards and Attached estates.

I.—The estates of a disqualified proprietor who owns, either alone or as a sharer with other disqualified proprietors, the whole of a revenue-paying estate or a share in an estate, other than an undivided share held in coparcenary as the property of a Hindu joint family governed by the Mitakshara or Mithila law.

II.—The estates of a minor, of which charge is taken by the Court of Wards on the application of the civil court. The civil court may, however, without an application to the Court of Wards, appoint the Collector, to be guardian of the property or person, or both, of a minor and, whenever the Collector is so appointed, he is, subject to the control of the Board as Court of Wards.

III.—The estates of a person adjudged, to be of unsound mind and incapable of managing his affairs, of which a civil court may apply to the Court of Wards to take charge.

IV.—Shares of disqualified proprietors in estates that have ceased to be subject to the jurisdiction of the Court of Wards may be continued under its charge.

By the term disqualified proprietors is meant—

(*a*) females declared by the Court of Wards incompetent to manage their own property;

(*b*) persons declared by the Court of Wards to be minors;

(*c*) persons adjudged by a competent civil court to be of unsound mind and incapable of managing their affairs;

(*d*) persons adjudged by a competent civil court to be otherwise rendered incapable by physical defects or infirmities of managing their own property;

(*e*) persons as to whom the Local Government has declared, on their own application, that they are disqualified, and that it is expedient in the public interest that their estates should be managed by the Court of Wards.

Besides the wards estates described above, the revenue authorities may be called on to take charge of attached estates. The various methods of attachment are described at pages 272-276 of the Wards Manual.

Encumbered estates.

In 1876 the Chota Nagpur Encumbered Estates Act was passed. It was designed to protect large ancestral estates from being sold up for the debts of their proprietors, and so passing into alien hands. The Commissioner was empowered with the previous sanction of the Lieutenant-Governor to appoint a manager and to vest in him the entire management of encumbered estates, whenever he thought fit to do so. On the publication of the vesting order all proceedings in the Courts, including processes of execution for debts, become barred, the holder of the property is not liable to arrest for debt and the power to alienate any portion of the estate is vested in the manager.

Duties of Court of Wards.

The Court of Wards was originally established for the security of the Government revenue, but Government interference on this score is no longer necessary, and the revenue officers who now take charge of wards' estates make it their principal business to extricate them from their financial difficulties and to employ surplus income in improving the estates and the condition of their tenantry. The policy laid down is as follows:—It is desirable in all cases to leave a ward on his attaining majority a sufficient cash

balance to relieve him of any temptation to press hardly upon his raiyats or change the Court's system of management, and to enable him to meet, as other landlords do, untoward calamities of season and other exceptional demands, without being driven to borrow money or sell any part of his estate. This being borne in mind, measures are taken to utilise surplus funds to the best advantage of the wards and their estate. It is unquestionably true that capital devoted to reproductive purposes is one of the greatest needs of this province and that money well invested in securities is money added to the reproductive capital of the country. This would be a strong argument in favour of investing the surplus funds of the estates in this manner, were there any reasonable probability that the ward, when he attains his majority, would keep up the investments, not to say add to them. But all experience proves that this is very rarely done. The Court accordingly, encourages such modes of utilising the surplus funds of an estate as will offer less temptation to extravagance when the ward attains his majority, such as the purchase of landed property and investment in mortgages; the maintenance in an efficient condition of the estates, buildings, and other immovable property; such allowances or donations befitting the position of the ward's family as the Court may authorise to be paid; and, above all, the improvement of the land and property of the ward, and schemes for the benefit of the ward and his property generally. Since it is the duty of all landlords to incur expenditure for the benefit of their tenants, the Board encourages reasonable donations and subscriptions to dispensaries and schools. As regards dispensaries, such expenditure as is befitting the ward's position is always freely incurred, while expenditure on schools is often looked upon with much favour locally, as it benefits the more influential classes, though such expenditure requires discrimination.

Among the methods adopted for improving the wards property the following are some of the most important :—

(*a*) Survey and record-of-rights.

(*b*) Irrigation works and sinking wells, or digging or improving tanks for the improvement of agriculture.

(*c*) Model farms and experiments in farming.

(*d*) Construction and maintenance of branch or feeder roads.

(*e*) Village sanitation.

(*f*) Advances to cultivators in the shape of either seed or cattle, or money to be expended on some permanent improvement.

In order to meet the salaries, travelling allowances, gratuities, pensions, and miscellaneous charges of the establishments employed in the Government offices for the performance of the work connected with the wards' estates, contributions are levied from the estates under management. So far back as 1828-29 the "Court of Wards' Fund" was opened to exhibit the charges incurred in the Board's office on account of such estates. In 1830-31 the charges on the same account incurred by Commissioners and Collectors, and in 1856 advances on account of the wards' institution, were debited to this fund, the actual amount expended on all the above accounts being met by recoveries levied rateably on the estates under management. In May 1851, a similar account was opened for "charges on attached estates". In 1863, the Board, on looking into the matter, found that the contribution was levied on different principles in different districts and divisions and after some discussion it was decided in 1865 that, instead of realizing from time to time the precise sums expended on account of each estate, a fixed rate should be levied on the mufassal rent-roll of each to meet the charges incurred in conducting the business of the Court of Wards and of all attached estates. The rate was fixed on a graduated scale, decreasing with the increase of rent-roll.

Rates paid to Government for superintendence of Wards estates.

The services of the Board of Revenue and of the Commissioners and Collectors, to whose supervision the improvements to the estates are mainly due, were given without any cost to the estates under management. A question was raised by the Secretary of State, in 1879, whether, in addition to the rates levied on account of establishment, a contribution should not be imposed for the services rendered by the various officers and departments of Government in superintending the administration of wards' and attached estates. There was much difference of opinion on the subject. Eventually it was decided that the existing system should remain unaltered. The question was re-opened in 1889 by the Government of India, and the discussions which followed resulted in the passing of Act X of 1892. Section 3 of the Act empowers the Government

to levy a rate on all private estates, as defined in the Act, in order to cover as nearly as possible the cost of all Government establishments employed and contingent expenditure incurred by the Government for the supervision and management of such estates. The rate is in no case to exceed 5 per cent. per annum. Power is reserved to the Government by section 3 to vary the rate from time to time and to reduce or remit it whenever this seems equitable. Irrespective of the rate leviable under section 3, the Government, under section 4, in cases where an officer of the Government is employed to audit accounts or give legal advice on behalf of any estate, may direct the levy of a special charge to be made against the estate on account of such services. This audit rate is levied rateably from the estates according to the practice which has been in vogue for many years.

Laws relating to wards estates.

The Court of Wards Act, IX (B.C.) of 1879, came into force in that year. The most marked changes introduced by it were the following. The Board of Revenue is now the Court of Wards for the whole province, previously each Commissioner being the Court of Wards for the districts of his division. When a civil court has occasion to make provision for the charge of the property and person of a minor or of a lunatic, it can apply to the Court of Wards, which is empowered to undertake or to reject such charge at its discretion. Formerly, under similar circumstances, the civil court addressed an order to the Collector, not the Court of Wards, and he had no option but to obey it. The Court can at any time withdraw from the charge of any estate of which it has undertaken the management at the request of a civil court. Formerly no such power was vested in the Collector. There now is nothing to prevent the Court of Wards from giving leases extending beyond the period of a ward's minority. This is an important change, as the granting of permanent leases on receipt of a premium is sometimes the best means of clearing off the liabilities of an encumbered estate.

Act IX (B.C.) of 1879 was amended by Act III (B.C.) of 1881. The primary object of the latter enactment was to admit of the payment of pensions being debitable to the ward's rate, though the opportunity was taken to amend the law in other particulars. The law regarding the exemption from sale of an estate, share, or

part of any estate under the Court of Wards was re-enacted with important modifications, and provision was made for the recovery of arrears of revenue due at the time when an estate ceases to be under charge of the Court. It was also enacted that if the Court of Wards has certified in writing, with the reason therefor, that the interests of the ward require a sale of his property, an estate may be sold for arrears of revenue which have accrued under the Court's management. The former provisions regarding the application of moneys received by the manager, and the relative priority, of claims to payment, were expanded in the new law. Power was given to impose a penalty on a farmer neglecting to furnish accounts. Interest on rent and costs incurred in obtaining and executing a a certificate were made realizable by the same process as an arrear of rent. Provision was also made for the recovery of expenses incurred on account of property in charge of the Court, after such property has passed out of the Court's management.

The Court of Wards Act was further amended by Act I of 1906, and under this enactment creditors were required to register all debts within a period of six months from the date of the notification by Court of Wards. By this means the Court is enabled at once to ascertain the indebtedness of estates of which charge is assumed. The same Act also enabled the surplus money from trust funds to be invested in wards' estates, and gave power to the Court to retain charge of estates until its debts and liabilities are cleared off, thus facilitating the taking of loans by the Court at a low rate of interest. Minor amendments were made in the original Act (IX of 1879) by Act IV of 1892 and Act II (B.C.) of 1909. Under the Decentralization Act (III of 1916), the Court was empowered to declare persons disqualified on their own application, and to delegate any of its powers to Commissioners, Collectors or other persons without the sanction of the Governor in Council.

Law relating to encumbered estates.

The Chota Nagpur Encumbered Estates Act of 1876 was amended by Act V of 1884, and after that again by Act III of 1909, the leading provisions of which empower the Deputy Commissioner of a district to take charge of an important estate, or one in which the interests of the tenants demand that course, without the consent of the proprietor when he is satisfied the latter is dissipating his property by reckless extravagance, and in certain

cases to restrain a disqualified proprietor from alienating his estate in any way. This Act was further amended in 1911-12 with the object of empowering the Commissioner to prohibit the sale of immovable property in execution of a decree or order of a civil or revenue court pending the issue of final orders on the application for protection made under the Act. The Act was further amended in 1922 when the Commissioner was given power in certain circumstances to modify a scheme of management or to release an estate when events proved that its condition was irremediable.

The orders of the Secretary of State in 1880-81 drew attention to the fact that while it is one of the first duties of a manager to adjust the accounts of his estate and to free it from fictitious demands, it is still more important that it should carefully revise the rent-roll, raising rents which are clearly inadequate, while not hesitating to reduce those which are excessive. His aim, in fact, should be to fix fair and uniform rates. The difficulty of giving effect systematically to these general principles was, however, admitted by the Government of India, and it was suggested that the best way of doing so would be by initiating a systematic field survey, conjoined with the preparation of a record-of-rights in all estates in which this was possible, a proposal which had, in fact, already been anticipated in the case of many estates in this province. Practically all wards' estates in the province have now been surveyed and settled in the general operations for the different districts.

Survey and record-of-rights in wards estates.

The following extract from Government order no. 162-T., dated the 9th May 1881, indicates the general lines pursued in the education of minors under the Court :—"As regards the future general policy for the education of minors under the Court of Wards, the Lieutenant-Governor does not think it necessary to lay down any hard-and-fast rule. He is entirely opposed to the wards being educated at their own homes, and considers it essential that they should be separated from the influences of the zenana and zamindari amla, and be sent to the best school in their own or some neighbouring district. The Board should arrange, in communication with the Director of Public Instruction and Collectors, the course best to follow in each case, looking to the age and present proficiency of each

Education of wards.

ward. Arrangements might, perhaps, be made for placing a few wards at each large station under the general charge of an officer of the Educational Department, private tutors being also allowed where funds are available and a ward's education requires this. The Board will see that in every instance as much care and consideration is given to the arrangements for a ward's education as is given to the efficient and economical management of his property, and that the Collectors take an active interest in the welfare and education of the wards belonging to their district or being educated in their districts."

During the last ten years the Court of Wards has taken charge of 30 estates, 7 at the request of proprietors, and 23 on the initiative of the Court itself. A brief account is given below of the three most important estates released during the same period, though besides these the Dumraon and Dhalbhum estates have been released as a result of judgments of the civil court.

Barari.

The Barari estate came under the charge of the Court on the death of Babu Sri Mohan Thakur, who left a widow and an infant son. By his will he appointed three trustees for the management of his property. At the request of the trustees the minor was declared to be a disqualified proprietor under section 6(*f*) of Act IX, 1879. The estate consisted of 4 annas share of a large undivided estate, comprising 341 estates or mauzas paying revenue to Government, besides 69 lakhiraj properties. The estate was released on the 31st May 1921 owing to the behaviour of the ward's mother, who besides interfering in the management of the estate, refused to obey the orders of the Court regarding the education of the ward, and so made it impossible to continue his education in a satisfactory manner. Owing to the undivided nature of the property the collection of rent was not always easy. During the period of management, however, the debts which amounted to Rs. 6,53,362 when the estate was taken in charge were reduced to Rs. 4,97,780 at the time of release, while a sum of Rs. 37,476 was spent on agricultural improvements.

Raja Satish Chandra Pande of Pakur died on the 14th December 1901 leaving a minor son, Kumar Kalidas Pande, as his heir.

The estate was brought under the management of the Court of Wards on the 21st January 1902 and was released on 13th December 1915. During the Court's management the entire debt due by the estate, which, including interest, amounted to Rs. 7,44,555 was paid off except for a payment of Rs. 32,000 which was made by the ward himself. At the same time the gross rental rose from Rs. 89,843 to Rs. 1,06,253. Rs. 22,772 were spent on improvements and Rs. 79,595 on the maintenance of estate buildings.

Pakur.

Raja Raj Rajeshwari Prashad Sinha of Surajpura died on the 6th April 1903 leaving a widow, mother and two minor sons, Kumar Radhika Raman Prashad Sinha and Kumar Rajiva Ranjan Prashad Sinha, aged about 13 and 10 years respectively. The Court of Wards, in its order of the 6th June 1903, declared the two sons to be minors under section 6(b) of Act IX of 1879, and took charge of their persons and properties. The estate, with the exception of two villages which are in the Ballia district in the United Provinces, lies in Shahabad. During the period of management the annual income of the estate rose from Rs. 1,44,653 to Rs. 1,88,571. The total debts due by the estate amounted to Rs. 4,87,334, and these have all been extinguished. The elder ward was trained in zamindari work and had been managing the estate for over a year before the estate was released on the 1st July 1917.

Surajpura No. 1.

At the permanent settlement Government, by abdicating its position as exclusive possessor of the soil, and contenting itself with a permanent rent charge on the land, escaped thenceforward the labour and risks attendant upon detailed mufassal management. The zamindars of Bengal proper were not slow to follow the example set them, and immediately began to dispose of their zamindaris in a similar manner. Permanent tenures, known as patni tenures, were created in large numbers, and extensive tracts were leased out on long terms. By the year 1819, permanent alienations of the kind described had been so extensively effected, that they were formally legalised by Regulation VIII of that year, and means were afforded to the zamindar of recovering arrears of rent from his patnidars, almost indentical with those by which the demands of

Patni tenures.

Government were enforced against himself. Such tenures, though not so common in this province as in Bengal, are occasionally met with.

Ijaras and other tenures.

In Bihar the ijara or thika system, by which portions of an estate are leased for a term of years, not primarily for cultivation but for collection of rents, is far more common. Permanent tenures either on fixed or on variable rent, but not subject to the special provisions of the Patni Regulations are to be found in most districts. Numerous tenures, often of historical interest, but not usually extensive, exist in several Bihar districts, having been created prior to the permanent settlement to remunerate local officials or to support discharged soldiers, or for similar reasons. Details may be sought in the final reports of district settlement operations. Sub-infeudation has not in any part of the province gone to the lengths it has reached in Bengal, and it is rare for more than two rent-receivers to intervene between the zamindar and the raiyat, while extensive areas are still held by raiyats paying rents direct to zamindars.

In Bihar, as has already been said, patni tenures are rare. They are replaced by istimrari, mukarrari and maurusi tenures. Istimrari means permanent, mukarrari fixed and maurusi heritable. The terms are used loosely, but ordinarily in Bihar istimrari is used to denote a tenure which is permanent, though it does not imply fixity of rent; mukarrari ordinarily means a tenure on fixed rent, but not necessarily, one that is permanent and heritable, though it is commonly used of tenures that carry all three qualifications. Maurusi is used to denote an ancestral tenure, or more often a raiyat's holding, as distinct from tenancies acquired within memory; it does not usually in Bihar denote fixity of rent. In the record-of-rights tenures which are permanent (and therefore by reason of section 11 of the Bengal Tenancy Act heritable) are described as "istimrari lekin mokarrari nahin," unless they are held at a fixed rent, when the phrase "istimrari mukarrari" is used. Mukarrari records has been used in some records to describe raiyat's holdings held at fixed rent by contract with the landlord, as opposed to holdings which have been proved to be held at fixed rents under the provisions of law which are described as "shara muaiyan."

Istimrari, mukarrari and maurusi tenures.

Guzashta and gorabandi are terms applied to raiyats' holdings rather than to tenures. The former is peculiar to the Shahabad

district, while the latter is chiefly prevalent in south Mōnghyr, though the term has been found in neighbouring districts. The true guzashta tenancy is limited to the northern portion of the Shahabad district, and there signifies a holding at a fixed rent or rate of rent. It is probable that the holdings were originally the land in cultivation of the old village zamindars, who lost their zamindari rights when settlement was made in considerable estates, such as the Dumraon Raj and the now defunct Buxar Raj. The term has spread over the district, and is used in many parts as a substitute for maurusi, but does not connote fixity of rent. The gorabandi tenancies of south Monghyr are similar in character and probably in origin, but the term has not spread in the same way. In the extreme south of the Monghyr district, which is a hilly tract partaking of the characteristics of the adjoining districts of the Santal Parganas and Hazaribagh, a form of tenancy known as chakband is found. This in origin was a grant by the zamindar to a headman of Santal or other non-Aryan tribes to clear and cultivate a "chak" or block of land. The headman or "chakbandar" brought his friends and relatives to settle in the tract, and paid a rent which he collected from the rest, making his own profit not from rent collection but from cultivation. The efforts of the zamindars in recent years have, however, in many cases been successful in turning out the original headman and substituting a thiccadar or temporary tenure-holder. The original tenancy where it still exists is something of an anomaly as it is neither a true tenure or a true holding according to the classification of the Bengal Tenancy Act. A somewhat similar history attaches to the hilly tract in the south of the Shahabad district known as the Kaimur hills, but the name chakband is unknown there.

Guzashta, gorabandi and chakband tenures.

One result of the settlement operations in the aboriginal tracts of Chota Nagpur has been a fuller understanding and recognition of the rights of village headmen, and chapter XV of the Chota Nagpur Tenancy Act has put such rights on a definite legal basis. In Chota Nagpur headmen are known as manjhis, pradhans, mandals, ijaradars and thiccadars. So far as can be ascertained the origin of the tenure is a reclaiming one. When the lands in villages founded by families of Mundas, Bhumijes or Santals came in time to be assessed with rent at the instance of the landlord, the latter appointed or recognised

Headmen of Chota Nagpur.

the chief member of the family which founded the village as pradhan or headman. The headman agreed to collect the rents and be responsible for them, minus a deduction as remuneration for his trouble, and he was also assigned other specific duties. He thus became the representative of the village community in all its external relations; he is also a chief resident raiyat. He is in one aspect a tenure-holder or landlord, and in another aspect a village official and a raiyat. In the case of *khuntkatti* headman the office is invariably hereditary; the tenures and offices of non-*khuntkatti* headmmen, who may properly be termed ijaradars, are not ordinarily heritable in their family, and they have no preferential rights to periodical resettlements unless these rights have been specifically secured by their pattas.

Headmen in Santal Parganas.

The headman system prevails throughout the Santal Parganas; in fact it is the mainstay of administration in that district and the headman occupies a prominent place in its settlement and rent regulations. Pradhan or manjhi is the name by which the headman is commonly known in the Santal Parganas, and he is here more an office holder than the headman of Chota Nagpur; he is a quasi-official and deals direct with the district authorities, whereas in Chota Nagpur, as headman, he has no direct relations with them: he is the head or representative raiyat of the village chosen by his fellows, with the approval of the Deputy Commissioner, to deal with the proprietor or rent-receiver and also to perform certain village duties that are renderable to the state. His office carries with it certain privileges, and as raiyat he has the same rights and duties as are common to his fellow raiyats. He cannot be dismissed except by order of the Deputy Commissioner.

Headmen of Orissa.

The headman system also prevails in Khurda, Angul, Banki and other Government estates of Orissa, where, under the name of sarbarahkars, the headmen have charge of the collection of Government revenue and are *ex-officio* patwaris for their villages under section 3 of Regulation XII of 1817. They are appointed by Government and have charge of all Government property within their villages. They receive a commission varying from 10 to 20 per cent. on the mufassal jama of their villages according to the circumstances of each village. The amount of jama and the size of villages controlled by these sarbarahkars formerly varied considerably,

and in order to establish a uniform system and to abolish sarbarahkaris with small jamas, a scheme was introduced about five years ago for regrouping sarbarahkaris, so that each should have a jama of approximately Rs. 1,000. These orders, however, have lately been largely modified, as it was found that the scheme encountered considerable opposition, and that in practice the amount of Rs. 1,000 was unduly high.

Besides the tenures described in the preceding paragraphs, derived either from ancient rights or created to relieve the zamindar of the trouble and risk of direct management, or of the labour and expenditure required for reclaiming waste lands, there are various service (jagir) tenures, of which the chaukidari chakran, the patwari jagirs and the ghatwali tenures are the most important.

Service tenures or holdings.

Before the advent of the British the zamindars not only defended the country against foreign enemies with armed retainers, but also administered the law and maintained peace and order with a large force of rural police known as thanadars or phanridars, chaukidars, paiks, etc., who helped in protecting the property of the zamindar, in collecting his revenue and in doing other services personal to the zamindar. All these officers were at that time servants of the zamindar, appointed and removed by him, and often remunerated by grants of land rent-free or at a quit-rent in consideration of their services. The lands so enjoyed were called chakran, or service lands. The effect of the decennial settlement was to divide these lands into two classes, (1) thanadari lands, which were made resumable by the Government; (2) all other chakran lands, which, whether held by public officers or private servants in lieu of wages were to be annexed to the malguzari lands and declared responsible for the public revenue assessed on the whole estate. A service tenure created for the performance of services, private or personal to the zamindar, may be resumed by him when the services are no longer required, or when the grantee of the tenure refuses to perform them. A zamindar, however, is not entitled to resume when the grant is for services of a public nature. The duty of protection having now entirely devolved on Government, the policy at present is to resume and assess all such lands as are resumable, and, accordingly, they are being converted, usually by amicable arrangement, into ordinary tenures. The chaukidari

chakran tenures are described and dealt with in Act VI (B.C.) of 1870, and land ceases to be chaukidari chakran when Government transfers it to the zamindar. It is liable to sale under the Revenue Sale Laws if the zamindar defaults in the contribution to the chaukidari fund fixed at the time of transfer. The patwari jagirs, or grants for the maintenance of patwaris who keep village accounts of rents, as between the zamindar and the tenant, have been resumed in Orissa and other temporarily-settled tracts, these functionaries having become mostly subservient to the zamindars. In other places they still retain their jagirs.

Ghatwali tenures are found in the districts of Bhagalpur, Monghyr, Manbhum, Singhbhum, Purnea, Patna and the Santal Parganas. Generally speaking these tenures were granted for rendering either military or police service and continue to be held in most cases on small quit rents. In pargana Dhalbhum in the district of Singhbhum and in pargana Barabhum in the district of Manbhum, ghatwali tenures are numerous. During the survey and settlement proceedings in these parganas, the origin of these tenures was specially investigated and it was clear that at the commencement of British rule, the ancestor of the present zamindars was the elected feudal chief, while the ancestors of the ghatwals who were of the same stock and the original reclaimers of the soil, were the chief vassals who rendered quasi-military service to their chief. A feudal organisation of this sort was essential at that time as a means of repelling aggression from without. In consideration of their feudal service the ghatwals held lands which they and their ancestors had reclaimed, at a quit rent which was never enhanced, and occupied a privileged position in comparison with later settlers. In course of time, the feudal chief assumed a more important position with reference to the ghatwals, and was recognised by Government as owner of the zamindari. To put down internal disorder and crime, the military force originally intended to repel outside aggression was transformed into a police force under the control of the zamindar, who, with his subordinate zamindars or the ghatwal tenure-holders, was vested with police powers. The zamindar was called upon to furnish periodical returns shewing the force at his disposal, and thus a number of such returns known as *isamnavisis* came into existence. In those returns the zamindar entered the whole or a certain portion of each ghatwali village as a service grant. The

Ghatwali tenures.

isamnavisis failed to show the true origin of these lands, and recorded what was but an accidental incidence of the time, that these were the lands held by the men rendering police service. Between 1880-85 a survey of those ghatwali lands was made, and the *isamnavisis* of 1833, in the case of Barabhum, and of 1837, in the case of Dhalbhum, were held to be authentic records on the basis of which a compromise was made between the zamindar and the ghatwals. The lands specified in the *isamnavisis* were assessed at low quit rents called *panchak*, and all excess lands were treated as ordinary *mal* lands of the village. Though in the record-of-rights ghatwali lands were recorded as service-tenures, there have been cases where the recorded character of the tenures has been questioned by the ghatwals, and it has been held that the incidence of police service for a time only did not change the original status of the tenure-holders, which was that of reclaimers of the soil.

Raiyati tenures.

The lowest in the chain of sub-infeudation are the raiyats and under-raiyats. Raiyats were formerly divided into two classes, known as *khudkasht* (resident) or *paikasht* (non-resident) or, as in Orissa, *thani* and *pahi*, but by the Bengal and Orissa Tenancy Acts, they have been finally classified into raiyats holding at fixed rents or rates of rent, occupancy raiyats; and non-occupancy raiyats. Settled raiyats are those who have held land in a village continuously for twelve years. They have occupancy rights in all the lands held by them, or which they may acquire, in such a village. The great majority of raiyats throughout the province now enjoy the status of settled raiyats, as a result of tenancy legislation and the preparation of the record-of-rights. Most of them pay cash rents, which can only be enhanced in accordance with the provisions of law, which prevent violent and arbitrary alterations. In south Bihar and to a minor extent in other parts of the province, however, many raiyats pay rent in kind. The most prevalent systems of produce rent are (1) danabandi, when the standing crop is appraised and the due proportion of the crop after customary deductions handed over on the basis of the appraisement, and (2) batai, when a division is made of the grain when threshed out. In either system it is usual for the raiyats to take the entire yield of certain crops which are difficult to divide, such as sugarcane, tobacco, etc., and to pay a cash rent for the area so cropped in any year.

Bhaoli and similar tenures.

Under the danabandi system the rent is often actually paid in cash on a valuation of the landlord's share of the crop. Other varieties of produce rent tenancies are mankhap, where the raiyat has to deliver a certain number of maunds of a specified crop for each bigha of land; manhunda where the raiyat delivers a certain number of maunds for his entire holding; and chauraha where the payment is made in cleaned rice and not in unhusked grain. Of late years there has been an increasing tendency for raiyats to apply under section 40 of the Bengal Tenancy Act for commutation of such rents, especially in areas for which a record-of-rights has been prepared. This is especially noticeable in the Gaya district, where, as a result of the recent settlement operations, the raiyats have learnt their rights as regards commutation and have filed large numbers of commutation cases. Peculiar forms of cultivating tenures known as *halhasila* and *birawari* prevail over a considerable portion of the Bhagalpur division and noticeably in the Purnea district. The tenant pays rent for the lands cultivated by him according to the nature of the crops grown on them, and for the fallow lands at the rate which he paid for the same land in the previous year, or according to the rate for the fallow land specified in his lease, when there is a lease and a condition to that effect. The *birawari* and *halhasila* systems are not really the same, as under the former every plot of land is assessed at some rate without any restriction on the acquisition of occupancy rights, while under the latter only the lands that actually bear a crop are assessed to rent and occupancy rights accrue after twelve years' continuous possession of the same plots. The under-raiyat, either pays rent in cash to the raiyat under whom he holds, or gives him a share of the produce of the holding. He is liable to ejectment on the expiration of the term of a written lease, and when holding otherwise than under a written lease, at the end of the agricultural year next following the year in which a notice to quit is served upon him by his landlord.

Under-raiyats.

In addition to the above tenures there are numerous small plots of land held revenue-free, the large majority of which were granted by former Governments, or zamindars under those Governments, as benefices or religious endowments—grants which have since been recognized and confirmed by the English Government.

Revenue-free tenures.

Jagirs were an assignment, not of the land itself, but of the revenue to which the State was entitled. The revenue was in some cases entirely remitted, while in others a quit-rent was retained. These jagirs were usually hereditary. They were often granted by former Governments to favourites of the Crown. If granted for the maintenance of zamindars and their families, they were called nankar jagirs.

Jagirs.

Lakhiraj tenures are of two kinds, bahali, that is, confirmed, and bazyafti, that is, resumed and assessed at favourable rents. Bahali lakhiraj tenures are again sub-divided into badshahi (royal) and hukumi (granted by officials). The former with their sub-tenures are known by various names, such as altamgha, aima, and madadmash, while the latter are distinguished by such names as brahmottar, debottar, mahattran. The owners of the bahali lakhiraj tenures, although exempted from paying any revenue, are held liable to pay local cesses of general application.

Lakhiraj tenures.

Revenue-free tenures created by the British Government are either railway and other lands sold in fee simple, or petty estates the revenue of which has been allowed to be redeemed by the payment of their capitalised value.

Following the example of former Governments in creating revenue-free tenures, the zamindars also have created many rent-free tenures on their estates in favour of Brahmins for religious and other purposes, to relatives and dependents for maintenance, and to servants for service. These are not recognised by the Government, to the extent of being protected against the purchaser at a sale for arrears of revenue, but are in practice very seldom disturbed.

Rent-free tenures or holdings.

The provisions of sections 12 to 15, 17 and section 18(*a*) of the Bengal Tenancy Act, and the similar provisions of the Orissa Tenancy Act, provide a system of official registry of the transfers of, and successions to, permanent tenures and holdings at rents, or rates of rent, fixed in perpetuity, and shares of such. The working of these sections was the subject of much complaint.

Transfers of tenures and holdings and their official registry.

Doubts and difficulties arose regarding the method of payment of the prescribed landlords' fee and the effect of non-payment of such fees. In view of the complaints of the landlords and the uselessness of registration as the law stood, the sections relating to the transfers were amended by Act I (B.C.) of 1903, and Act I (B.C.) of 1907. The costs of transmitting the landlords' fee must now be paid in to the Collector, who is charged with the duty of transmitting the fee and serving the notice of transfer. If the landlord refuses the fee, and it is not paid out within three years, it lapses to Government.

Rent of under-tenures and raiyats.

The general provisions of the Regulations of 1793 were in favour of the tenant. The theory of the permanent settlement was to give to all under-holders, down to the raiyat, the same security of tenure as against the zamindar which the zamindar had as against the Government. Sub-holders of taluks and other divisions under the zamindar were recognized and proteted, subject to the payment of the established dues. With respect to the raiyats, the main provisions were these: all extra cesses and exactions were abolished, and the zamindars were required to specify in writing the original rent payable by each raiyat at the established rates of the pargana. If any dispute arose regarding the rates to be so entered, the question was to be "determined in the civil court of the zilla in which lands were situated, according to the rates established in the pargana for lands of the same description and quality as those respecting which the dispute arose." It was further provided that no zamindar should have power to cancel the leases, except on the ground that they had been obtained by collusion at rates below the established rates, and that the resident raiyats should always be entitled to renewed pattas at these rates. In fact, fixity of tenure, and perhaps also fixity of rent-rates, were intended to be secured to the raiyats by law. Provision was made for kanungos and patwaris, one object of whose appointment was declared to be "to prevent oppression of the persons paying rent." On behalf of the raiyats it was a record-of-rights, only that was wanting, and has now been prepared for the whole of the province with the exception of a portion only of the district of Manbhum where also it is nearing completion, and some permanently-settled

areas in Orissa which now are being taken up. The status that was designed for the tenantry was, however, much impaired, and to a large extent destroyed, by the great powers subsequently given to the zamindars under the old Haftam (seventh) and Panjam (fifth) Regulations with a view to enable them to realise their rents. Under the notorious Haftam process (Regulation VII of 1799), the person of the raiyat could be seized in default; under the Panjam process (Regulation V of 1812) the power of arrest was abolished but his property could be distrained. These measures were justified at the time by the alleged necessity of securing the collection of the land revenue, and it was argued that, as Government had the right to sell up the estate of the zamindar for default, it was necessary to give him corresponding powers as regards his raiyats.

Act X of 1859.

It soon, however, was realised that raiyats and their rent could not be treated in the same footing as zamindars and their revenue. Eventually to remedy this state of things the whole rent law was remodelled by Act X of 1859. By this law the cultivators were divided into four classes :—

(1) Those who had held their lands at fixed rates of rent since the time of the permanent settlement.

(2) Those whose rent had not been changed for twenty years.

(3) Those who had held for twelve years.

(4) Those who had held for less than twelve years.

The Act provided that the rent of the first class of tenants should not be raised at all; that the cultivators of the second class should be presumed to have held since the permanent settlement, unless the contrary was proved; on the third class it conferred a right of occupancy, under which the rent could only be enhanced for certain specified reasons, and by a certain procedure; while to the fourth class the Act gave no vested rights, but left them (unless they were protected by local custom) in the position of mere tenants-at-will. The Act also abolished the zamindars' power to compel the attendance of raiyats against their will, amended the law of distraint, made provision for the interchange of pattas and kabuliyats between landlord and tenant, and the delivery of receipts for rent by the former; arranged for the registration of transfers of tenures, and afforded the remedy of a summary process for the settlement of

disputes about rent. Rent suits were at first tried in revenue courts, but in 1869 were transferred to the civil courts. The experience of twenty years having shown that the provisions of the Act were inadequate to accomplish the objects for which it was framed, the Government issued a Commission in 1879 to enquire into the matter.

The Rent Law Commission, on the 19th June 1880, submitted their report with a draft Landlord and Tenant Bill, which purported not only to amend, but to consolidate, the whole rent law of Bengal. The Bill, however, was not accepted in its entirety by Government. Further discussions ensued, and subsequently a Bill was drafted by the Government of India and introduced in Council on the 2nd March 1883. A further draft was prepared, and finally on the 14th March 1885 the Bengal Tenancy Act VIII of 1885 became law, but did not come into force till the 1st of November of the same year. This Act is now so well known that it is unnecessary to give any detailed description of its provisions. A few of the most important alterations effected by it are, however, given below :—

Changes introduced by Bengal Tenancy Act VIII of 1885.

A raiyat became a "settled raiyat," and acquired rights of occupancy in all the lands he held in a village, provided he had held any land for twelve years in the same village. If he has held any land for twelve years in a village, he acquires occupancy rights in all the land he holds, or may in the future hold, in that village. In any proceeding between a raiyat and his landlord it is to be presumed that the raiyat is a "settled raiyat" until the contrary is proved.

Settled raiyats.

The grounds on which an occupancy raiyat's rent may be enhanced were modified, and the enhancement of his rent by suit facilitated; but, on the other hand, the enhancement of his rent by contract was restricted, and there are now few important rights conferred on him by this Act which a raiyat is competent to contract himself out of. All notices of enhancement were abolished, owing to the difficulty experienced in drawing them up in accordance with the provisions of the former law, as well as of proving their service. The institution of the enhancement suit is now all the notice of enhancement required to be given to the tenant. If an occupancy raiyat's rent has once been enhanced by contract or suit, no suit for the further

Enhancement of rent.

enhancement of his rent, except on the ground of a landlord's improvement, will lie until after the expiry of fifteen years. An occupancy raiyat or his landlord is empowered to apply for commutation of rent payable in kind.

Non-occupancy raiyats.

A non-occupancy raiyat can be ejected at the will of his landlord, only if he has been admitted to the occupation of the land under a registered lease, and after the service on him of a six months' notice to quit, and within six months of the expiration of the term of his lease. If he objects to pay enhanced rent the rate of rent can be fixed by the court. If the raiyat refuses to pay the rent so fixed, he can be ejected. But if he agrees to pay it, he is entitled to remain in occupation of the land at that rent for five years.

Receipts.

A landlord is bound to retain the counterfoil of every receipt he gives to a tenant, which receipt has to contain certain specified particulars, and every tenant is entitled, at the end of each year, to a receipt in full or a statement of account up to the close of the year. Further, a receipt which does not contain substantially the particulars required by law will be presumed to be a receipt in full up to date.

Improvements.

Provision was made for tenants making improvements in their holdings and for their recovering compensation for them in the event of eviction. A system of registering improvements, whether made by the tenant or the landlord, has also now been introduced.

Ejectment.

No tenant can be ejected except in execution of a decree, and the landlord can only distrain through the civil court, and notwithstanding the distraint the tenant is entitled to reap his crops.

Settlement and record-of-rights.

In chapter X provision is made empowering the Local Government in any case with the previous sanction of the Governor General in Council, and without such sanction in certain cases, to order that a survey and record-of-rights be prepared in respect of the lands in any local area, estate or tenure, or part thereof, by a revenue officer, and when any such record-of-rights and settlement of rent is proceeding, the ordinary civil courts are precluded from

entertaining any suit for the alteration of the rent or the determination of the status of any tenant in the area to which the record-of-rights relates.

Suits for arrears of rent.

A landlord can no longer harass his tenant by instituting successive suits for arrears of rent against him. Three months must elapse between each successive rent suit.

Subsequent amendments.

Certain alterations have been made in this Act by subsequent legislation. Act III (B. C.) of 1898 introduced important amendment including the remodelling of chapter X of the Act. A new definition of "prevailing rate" was enacted with the object of facilitating the ascertainment of the prevailing rate of rent, but this definition only comes into effect in districts, or parts of districts, to which it is specially extended. In amending chapter X of the Act, the opportunity was taken to introduce a more summary procedure for settling rents in cases where a settlement of land revenue is being, or is about to be, made. The revenue officer in such cases now prepares a settlement rent-roll in which the rent of each tenant, as settled by him, is entered. Rents entered in a settlement rent-roll which has been duly published are final, subject to a suit which may be brought within six months of publication upon certain specified grounds, among which the fairness of the rate of the rent fixed is not included.

Act III of 1898.

Act I of 1907.

A most important amendment of the Act was made in 1907 by Act I (B.C.) of that year. The settlement operations had brought to light many instance of abuse of their power by zamindars: on the other hand, it was desirable to facilitate the collection of their just dues; further, in the course of the twenty years that had elapsed since the passing of the original Act, many ambiguities and anomalies had arisen owing to conflicting judicial opinions and decisions. The new Bill accordingly empowered the Local Government to extend to the estates of approved landlords the summary procedure for the recovery of rents known as the certificate procedure. Raiyats were protecteed from *ex parte* decrees and from illegal compromises by provisions which made it necessary for plaintiffs in rent suits to produce extracts from the record-of-rights, and which prevented

civil courts from accepting compromises embodying illegal agreements. Greater authority was thus given to the finally published record-of-rights, and a further safeguard in this direction was the provision that every entry in a record-of-rights duly published shall be presumed to be correct until it is proved by evidence to be incorrect. An addition was also made which rendered it possible to deal more stringently with landlords who failed to grant proper rent-receipts. Another important addition to the law is a section which makes it possible to prepare a record of water rights in areas where disputes are likely to arise.

Champaran Agrarian Act.

In 1918 a short Act, the Champaran Agrarian Act, was passed supplementing the Bengal Tenancy Act. This Act was designed to settle disputes between indigo planters and their tenants in consequence of the enhancement of rents due to the abrogation of the obligation of tenants to grow indigo.

The Bengal Tenancy Act is in force in the Patna, Tirhut and Bhagalpur divisions (excepting the Santal Parganas). Chota Nagpur and Orissa (excluding Sambalpur) have now each a Tenancy Act of their own, while the relation between landlords and tenants in the Santal Parganas is governed by the Santal Parganas Rent Regulations III of 1912 and II of 1886, and in Sambalpur by the Central Provinces Tenancy Act X of 1898.

The relations between landlords and tenants have generally adjusted themselves to the various acts. Disputes have been lessened and simplified and both, landlords and tenants, are learning to recognise and respect each other's right. In Bihar, especially, differences, however, still exist, such for instance as the right of tenants to trees on their holdings and the right to transfer. To remove these causes of friction as well as to meet certain grievances of the landlords, a Bill to amend the Bengal Tenancy Act was presented to the Council in March 1922. Its provisions had already been under discussion for four years previously, and were examined by the Select Committee in the interval between the introduction and detailed consideration by the Council in February 1923. It is to be regretted that no solution of the main points could be reached that was reasonably satisfactory to the various interests involved, and consequently the Bill was withdrawn by Government.

Special tenures in Chota Nagpur.

In no other part of the province can the stages of evolution of successive village systems and forms of landholding be found existing side by side as in Chota Nagpur. In the intact *khuntkatti* villages the original village community, or the *khuntkattidars* as a body, still retain full proprietary rights subject to the payment of a fixed quit rent to the superior landlord. Each *khuntkattidar* pays his share (*chanda*) fixed originally, irrespective of the land he held; this quit rent is paid to the secular headman (*munda*) of the village, who in his turn pays it to the *manki* or to the superior landlord. Every *khuntkattidar* of an intact *khuntkatti* village has the right to reclaim any waste land within the village limits. *Khuntkatti* tenancies are inalienable except under certain conditions. In some villages the "raja" or superior landlord has succeeded in securing a few acres of land as his own share, and such land is called *rajhas*. In other villages the further disintegration of the village system can be traced.

Khuntkatti villages.

Bhuinhari villages.

In the *bhuinhari* villages the *khuntkatti* system has been completely obliterated. Only a few fragments of the old *khuntkatti* lands of the original clearers of the soil remain to their descendants, and these are called *bhuinhari* lands. In 1880 a survey and record was made and a register of such lands prepared. In the settlement operations in the Ranchi district these lands were duly identified and included in the record-of-rights. *Bhutkhcta*, *dalikatari* and *pahani* tenures are commonly found. These are lands set apart for the due performance of the worship of the village spirits or *bhuts*, and are held as remuneration for his services by the village priest or *pahan*. Similarly, *mahatoi* are the service lands of the *mahto* or village headman.

Manjhihas.

Manjhihas are the landlords' privileged lands in which raiyats cannot acquire occupancy rights. A full description of the different tenures will be found in the final reports of the district settlement operations, other than Manbhum. Considerable information as regards Manbhum may be found in the final report on the Barabhbum and Patkum settlement operations.

For generations the aborigines of Chota Nagpur had been in a state of unrest owing to inability to protect their rights in the land. The estates of the indigenous landlords had been passing into the hands of aliens, chiefly of the money-lender class, and the latter, when they came into possession, set themselves to break up the ancient communal system of the Mundas and Oraons and to enhance their rents. The result was there have been constant disputes between landlords and tenants, and occasionally armed risings of the latter. To remedy this the Chota Nagpur Tenures Act of 1869 and the Landlord and Tenant Procedure Act of 1879 were passed into law, but these measures did not sufficiently recognise the rights of the original reclaimers of the soil and ignored intact *khuntkatti* villages. The destruction of such tenancies went on, and the discontent excited thereby culminated in the outbursts of 1888 and 1899-1900. This prolonged disaffection led to the preparation of a record-of-rights for the Ranchi district, and the experience gained in this settlement made it clear that the agrarian law of Chota Nagpur needed a thorough revision; it had already been partly revised by Act V of 1903, part of which Act dealt with Mundari *khuntkatti* tenancies. An entirely new Bill was accordingly introduced and passed as Act VI of 1908. The most important features of this enactment are the introduction from the Bengal Tenancy Act of the principle of the settled raiyat, provision for commutation of produce rents, definite prohibition against enhancement by private contract, and special provisions for protection of Mundari *khuntkattidars* and village headmen. The Act was extended to Manbhum the year after it was passed, and has so far worked smoothly. Considerable amendments were made in this Act in 1920. These amendments relate among other points to the enhancement of the rent of tenure-holders or village headmen, the acquisition by landlords of lands of tenants having occupancy rights, the registration of transfer of raiyati holdings by succession, the inheritance or sale of occupancy holdings, and the validity of the transfer of raiyati-holdings other than transfer by an aboriginal to a non-aboriginal. Under special orders of Government, however, some of these amendments have not yet been brought into force.

Chota Nagpur Tenancy Act VI of 1908.

Subsequent amendments.

In its agrarian and fiscal history Orissa has features essentially different from those of the rest of the province. It did not come within the pale of British administration till its conquest from the Marathas in 1803, that is forty years after the Dewani grant which brought Bengal and Bihar under British administration. During this period, and for ten years earlier, it had been the prey of Maratha misrule. For the previous century and a half it was a separate province of the Mughal Empire. Long before the Mughals came it had evolved its own revenue system under the sway of its indigenous Hindu Rajas.

Special account of Orissa.

When Orissa was first taken over by the British, it consisted of three distinct zones. There was the wild impenetrable hill country in the west north-west, which was owned by Feudatory Chiefs, and had never been effectively subdued by the Mughals or Marathas. This region was exempted from the operation of the ordinary revenue and police regulations by Regulations XII and XIII of 1805. It forms the Tributary Mahals or Garjhats of the present day, and is separately administered. The Commissioner of Orissa was Superintendent of the Garjhat estates, and in 1905 a Political Agent was appointed to assist the Chiefs in administration. Under recent orders the Tributary Mahals have been taken out of the control of the Commissioner of Orissa and placed under the Political Agent with the designation of "Political Agent and Commissioner of Feudatory States."

Garjhat estates.

There was the second zone of seaward estates on the east or south-east owned by noble families, many of whom were related to the last Hindu kings of Orissa. They paid quit rents called *peshkash* to the Marathas. The British Government in 1805 continued the old *peshkash* revenue in perpetuity. There are 12 such estates with an area of 1,760 square miles. They are governed by the same agrarian laws as the rest of Orissa, and have always been subject to the ordinary laws and regulations of Bengal. Between the Feudatory States and the permanently-settled estates lies the core of Orissa, the Mughalbandi, which was fully subject to the sway of the Mughals and Marathas, and has developed into the temporarily-settled tracts of the present day.

Under the zamindars, that is, the proprietors who took settlement from Government and pay revenue to Government direct, is a class of subordinate proprietors or proprietary tenure-holders, who were originally village headmen, dealing more or less direct with the revenue authorities. They have a variety of names, such as *mukadam, padhan, maurusi sarbarakar, pursethi, khariddar* and *shikmi zamindar.* These sub-proprietors or proprietary tenure-holders pay their revenue through the zamindars of the estates within which their lands lie.

Tenures of Orissa.

There are, besides the *lakhiraj bahaldars*, or holders of confirmed revenue free lands, who are independent proprietors but pay their cesses through the zamindars to Government. The tenantry who hold beneath the proprietors and proprietary tenure-holders mentioned above may be divided roughly into seven classes; (1) the *tankidars*, or holders of small areas permanently assessed at a quit rent; (2) the *nisfibaziaftidars*, or holders of resumed rent-free lands assessed at half rates; (3) the *kamil baziaftidars*, or holders of resumed rent-free lands assessed nominally at full but actually at favourable rates; (4) the *thani* raiyats, or resident cultivators, whose rents were fixed for the term of the settlement; (5) the *chandina* raiyats, or holders of homestead lands, whose rents were also fixed for the term of the settlement; (6) the *pahi* raiyats, or non-resident raiyats, who were in ancient time practically tenants at will but have now generally acquired occupancy rights in accordance with the permission of the Bengal Tenancy Act; subsequently extended to Oirssa; and (7) the holders of service and other jagirs who hold their lands either rent-free or on quit rents, in consideration of services to be rendered or as rewards for services in the past.

Lakhiraj Bahaldars.

Bengal proper, Bihar and Orissa remained under the governance of Act X of 1859 till 1885, when the Bengal Tenancy Act was passed, and while the two former areas received the benefit of a complete and self-contained agrarian code, Orissa alone remained subject to the obsolete and inadequate provisions of the former Act. But power had been taken in the Bengal Tenancy Act to extend its provisions in whole or in part to Orissa, and during the revenue

settlement of 1890—1900 it was found necessary to supplement Act X of 1859 by the extension of various sections of the Bengal Tenancy Act. Much difficulty, however, was experienced by local officers in administering the two different codes. It was constantly found that the provisions and procedure of one Act were in conflict with the provisions and procedure of another. Moreover, the settlement revision operations, commenced in 1906 under the orders of the Government of India to pave the way for that continuous maintenance of settlement records which has been the policy of Government in other parts of India, and which it was thought might be fittingly extended to the temporarily-settled tracts of Orissa, had not been long in progress before they brought to light numerous disputes and disagreements between landlords and tenant for which it was difficult, if not impossible, to find a remedy in the agrarian law of Orissa as it stood. It was decided by the Government of Bengal that Orissa required to have a self-contained agrarian code in order to meet these difficulties, and a separate Tenancy Act for Orissa was passed in 1913 by the Bihar and Orissa Council.

Tenancy Law of Orissa.

CHAPTER VIII.

System of Settlement and Surveys and Settlements.

I.—System of Settlement.

According to the earlier Regulations on the subject, it was the duty of the officer making or revising a settlement to unite with the adjustment of the assessment, and the investigation of the extent and produce of the lands, the object of ascertaining and recording the fullest possible information in regard to landed tenures, the rights, interests, and privileges of the various classes of the agricultural community. For this purpose his proceedings were to embrace "the formation of as accurate a record as possible of all local usages connected with landed tenures, as full as practicable a specification of all persons enjoying the possession and property of the soil, or vested with any heritable or transferable interest in the land or the rents of it, care being taken to distinguish the different modes of possession and property, and the real nature and extent of the interests held, more especially where several persons may hold interests in the same subject-matter of different kinds or degrees."

Early history.

These requirements of the law were never fully carried out, being found beyond the capacity of the agency available. A remedy was provided by Regulation IX of 1833, which, *inter alia*, repealed so much of Regulation VII of 1822 as prescribed that the amount of jama to be demanded from any mahal should be calculated on an ascertainment of the quantity and value of actual produce, or on a comparison between the cost of production and value of produce. The principle was then adopted that the only safe and practical foundation for the calculation of the public revenue was the rent actually paid by the several tenants, of whatever class or description, and that when it was found impossible to obtain this information in the estate under settlement, the rent paid for land of the same quality and under similar circumstances in the adjoining estates was the best criterion. In 1837 it was directed that the assessment should be according to the value and capabilities of the land, and not according to the crops produced. These orders

were, however, subsequently modified by various enactments, and the rules by which the settlement of fair rents and the assessments of land revenue are now governed are contained in the various Acts relating to rent and settlement and in the Board's Survey and Settlement Manuals of 1908.

Lands liable to settlement of land revenue.

The revenue of the greater part of the province, having been fixed in perpetuity by the permanent settlement, is not liable to alteration or resettlement. The following lands are, however, liable to assessment or re-assessment and settlement of land revenue :—

(*i*) waste lands, not included in a permanently-settled estate, of which the revenue has never been settled;

(*ii*) temporarily-settled estates or tenures, the property of Government or of private individuals (on expiration of the terms of the current settlement);

(*iii*) estates or tenures purchased on account of, or escheated or forfeited to, Government;

(*iv*) resumed revenue-free lands;

(*v*) islands thrown up in navigable rivers under certain conditions;

(*vi*) alluvial accretions;

(*vii*) lands acquired, but no longer required for public purposes; and

(*viii*) lands annexed by conquest.

Comparative statement of revenue received from such estates.

A comparison between the number of such estates and the revenue demanded from them in 1911-12 and 1921-22 is given below :—

Division.	Number of Estates.		Revenue demanded.	
	1911-12.	1921-22.	1911-12.	1921-22.
Patna	682	728	5,41,874	6 83,961
Tirhut	154	144	63,599	68,544
Bhagalpur	159	178	5,27,191	5,34,547
Orissa	8,886	11,187	2,836,991	28,48,547
Chota Nagpur ...	25	27	3,41,411	4,25,837
	9,906	12,264	43,13,666	46,11,436

In practice, it has not been found possible to dispense with detailed enquiries in resettlement of estates. In alluvial estates the rapid physical changes have prohibited resettlements on the ascertained data of previous settlements. In estates of a more stable character, the rough measurements and the rougher record of them on which previous settlements were based the imperfect record-of-rights, the numerous changes in holdings (making identification impossible), the extensive additions to the cultivated area, the great increase in the profits of land and in its letting value during the currency of the long term settlements (30 and 40 years) have made it often impossible to dispense with detailed measurements and settlement enquiries as the basis of the revised assessment. It has therefore now been laid down that no settlement or resettlement should be concluded without first making a survey or revision of survey, and a complete record-of-rights of the whole estate.

Present rules governing settlement.

Other important rules that have been laid down for the guidance of revenue officers making settlements, are :—

(*i*) no estate of any kind (save those described in the next following clause) are to be settled in perpetuity without the express sanction of Government in each case, unless the holders have a statutory right to such settlement;

(*ii*) very petty estates, which, pay less than one rupee land revenue per annum, may be sold revenue free for ever, being put at an upset price of ten times the annual jama, or sold by special bargain to the cultivator in possession at not less than the above rate;

(*iii*) alluvial accretions to private estates should be settled separately for a term of years, each accretion being settled with the estate holder to whom it may belong;

(*iv*) ordinarily, as existing leases or other arrangements fall in, Government estates should be settled for a long term of years (*a*) with the people on the ground, tenure holders or village headmen, or raiyats where this can be done, or (*b*) with a farmer, but this only in very exceptional cases;

(v) until the survey and record-of-rights necessary to resettlement can be completed, existing leases may be extended from year to year.

These rules which have been in force more or less without alteration since 1873 have necessitated the establishment of a Settlement Department for the conduct of these operations. In 1872-73 the agency at the disposal of Collectors for such surveys was largely improved, but the department was not definitely organized until the re-settlement of Orissa and the survey and preparation of a record-of-rights in north Bihar were commenced about thirty years ago.

Creation of the Departments of Bengal Surveys and of Director of Land Records and Agriculture.

In view of these operations it was decided that economy and efficiency would be secured by placing the survey operations under the supervision of an Imperial Survey Officer who would be under the administrative direction of the Provincial Government and would advise the local authorities. A Director of Bengal Surveys was accordingly appointed from the 1st of April 1892. The department continued from that date up till 1913 to be in charge of an Imperial officer of the Survey of India, the name of the appointment being changed to Superintendent of Provincial Surveys in 1895, and again to Director of Surveys in 1908. The Department of Land Records and Agriculture was created six years before the Department of Provincial Surveys. A special officer with the title of Director of the Agricultural Department, Bengal, was appointed for two years in December 1884, in order to advise the Government on matters relating to agriculture and agricultural statistics, to undertake preliminary enquiries in connection with the experimental cadastral survey in the Patna division, and to assist in collecting detailed information in regard to the creation of a local agency for the record-of-rights in wards' and Government estates. The experience thus gained proved the need of such an officer not only for improving and extending knowledge of agricultural facts, but also for supervising settlement operations, and eventually the appointment, under the title of the Director of Land Records and Agriculture, was permanently sanctioned by the Secretary of State with effect from the close of 1886-87.

The duties of the Director of Land Records and Agriculture in connection with settlements became heavier with the gradual extension of the operations. At the same time his work connected with agricultural research increased steadily, till it became impossible for one Director to deal adequately with both branches, and in 1905, a Department of Agriculture was constituted, leaving the Director of Land Records free to devote his whole attention to the supervision of the important settlements in progress.

Separation of the Agricultural Department.

In the districts where the survey and settlement operations first began, the traverse survey, the cadastral survey and the preliminary record-writing were carried out by officers working under the control of the Survey Department, the Settlement Department being responsible for the correctness of the record but not for the progress of the field work. The system worked with reasonable efficiency, although a certain amount of difficulty arose from time to time on account of the dual control. In 1898 the experiment was made in the Santal Parganas Settlement of entrusting the whole of the cadastral survey and record writing to the Settlement Department, and confining the work of the Survey Department to traverse survey. The system proved to be both economic and efficient and was extended to the Chota Nagpur Settlement in 1905 and to the Bihar Settlement in 1907-08, where it also proved successful. With the gradual completion of the traverse survey of the province the work of the Survey Department decreased, and in 1913 it was amalgamated with the Settlement Department under the Director of Land Records and Surveys.

System of survey and settlement.

II.—Surveys and Settlements.

The first professional village survey in this province was the revenue survey of 1843-49. It was during this period that Act IX of 1847 was passed, and it formed the basis of another professional survey for revenue purposes, *viz.*, the diara survey of 1864-65 to 1867-68. The revenue survey was important, as it led to the discovery of land still remaining unassessed and furnished the materials from which Collectors compiled their land registration registers about

The Revenue Survey.

thirty years later. Prior to the commencement of the north Bihar operations it had always been customary for the professional survey to be preceded by a demarcation of boundaries made by the civil authorities, and the revenue survey operations comprised two parts, the non-professional and the professional. The first comprised an unprofessional survey of the village boundary, and furnished information as to whether the village was compact or in isolated blocks, who the proprietors were, the amount of rent-free property, the standard of measurement and details of cultivation. Boundary disputes were also dealt with at this stage, but the work of demarcating estates within the villages or *thakbast*, appears to have been entrusted to the professional department. One of the results of the revenue survey was the cessation of disputes about village boundaries. It also did much towards putting the relations between landlord and landlord on a satisfactory footing, but in the interests of tenants it was of little benefit as, in the absence of detailed boundary marks, it was difficult to utilize the maps for subsequent operations or for administrative purposes generally. It is noteworthy that in the recent survey and settlement operations particular attention has been paid to the erection of permanent boundary marks, and to ensuring their inspection and preservation.

The revenue survey, which was mostly on the scale of 4″ to a mile, but included topographical survey on a smaller scale in the wilder parts of the province, covered a total area of approximately 77,248 square miles, of which 11,153 square miles was undertaken in the Patna division, 12,530 square miles in the Tirhut division, 18,612 square miles in the Bhagalpur division, 8,160 square miles in the Orissa division and 26,793 square miles in the Chota Nagpur division. The area in which cadastral surveys on the 16″ to the mile scale have been carried out during the past thirty years are approximately 11,048, 12,570, 17,575, 12,599 and 23,420 square miles in the same five divisions, respectively.

Special Ganges diara survey.

The object of this survey was the compilation of a special set of maps showing permanent marks and other prominent points in the diara tracts which should show the difference between modern survey, Revenue survey and diara survey village

boundaries, and facilitate the relaying of any of them when required. Various schemes were put forward and experimented upon from time to time for a complete survey of the diara areas. The survey was commenced in 1862, but the maps of this survey were never kept up to date. In 1907 Government sanctioned a scheme for the survey of an area of about 1,200 square miles embraced by the diaras of the Ganges, the Gogra and the Gandak rivers so far as they affected the districts of Shahabad, Patna, Monghyr, Darbhanga, Muzaffarpur, Champaran and Saran. A start was made experimentally in the field season of 1909-10. After considering the result of the experiments of 1909-11, Government sanctioned the gradual extension of the operations as far as the trijunctions of the districts of Purnea, the Santal Parganas and Malda, at an estimated cost of Rs. 32,947 distributed over four years—1911-12 to 1914-15. This survey was carried out, and there is now a regular chain of reference pillars extending along both banks of the river Gogra from Manjhi on the Saran—Ballia boundary to Chapra, and of the Ganges from Chapra to Sahibganj and thence to Barharwara in the Santal Parganas—Malda border, where the chain extends along the right bank only. The reference pillars have been plotted in position on combined maps on the $4'' = 1$ mile scale. They are examined annually by the district staff and reports made to the traverse section under the control of the Director of Land Records and Surveys. Missing and damaged pillars are replaced by that agency.

A continuous congregated map on $2'' = 1$ mile scale is under preparation for the diara areas of the Gogra and Gandak rivers, showing the revenue, the diara and the modern cadastral survey boundaries separately.

(a) *Settlement operations in Orissa.*

Settlements in Orissa.

The settlement of the temporarily-settled portion of Orissa was effected by a series of ten short temporary settlements from 1805 to 1837, when a new settlement, that of 1837-45, was undertaken. This settlement was based upon a careful measurement, costing upwards of 20 lakhs but yielding an increase to the revenue of only Rs. 34,980. It was a thirty years' settlement, but was subsequently extended for

another thirty years, in view of the distress occasioned by the Orissa famine of 1866. The resettlement of 1889-1899 dealt with an area of 5,897 square miles, the permanently-settled estates and the area occupied by the Chilka lake being excluded. Of this area 66 per cent. was found cultivated, 9 per cent. culturable but not cultivated, and 25 per cent. unculturable. Rents were settled for a million and half of tenants and Government revenue was fixed for nearly 6,500 estates.

Changes during the currency of the 1837 settlement.

The changes during the currency of the settlement of 1837 were an increase of population by over 80 per cent., an extension of cultivation by 30 per cent., large improvements in communications, a marked rise in the prices of staple food crops, and enhanced profits to cultivators and landlords. The number of estates rose from 3,571 to 6,377, and that of landlords from 8,000 to 42,400.

In the resettlement proceedings rents were settled for all the tenants including those holding at privileged rates, the general result being as follows :—

Number of holdings.	Area. (Acres.)	Existing assets.	Settled assets.	Percentage of enhancement.	Incidence of settled assets per acre.
1	2	3	4	5	6
		Rs.	Rs.		Rs. a. p.
1,225,290	1,838,000	34,90,900	38,67,000	13	2 1 0

The enhancement of 13 per cent. shown in the table above was mainly due to increase obtained on the rentals of *nisfi bazyaftidars*, a class of tenants holding in the previous settlement at privileged rates which were very low.

Assessment of revenue.

Nearly 6,400 estates, situated in 11,000 villages, were assessed to revenue. The actual percentage of the assets taken as revenue was 54 as

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compared with 70 per cent. at the settlement of 1837, and the results of the resettlement of revenue were as follows :—

Existing assets.	Existing revenue.		Settled assets.	Settlement revenue.	
	Percentage of existing assets.	Amount.		Percentage.	Amount.
1	2	3	4	5	6
		Rs.	Rs.		Rs.
34,09,900	41	13,84,190	38,67,600	54	21,05,073

The incidence of the new revenue per acre was Re. 1-1-10, as against Re. 0-15-7 of the old revenue. The 1897 settlement was for thirty years, and the total expenditure on this resettlement was Rs. 30, 60, 100 or Rs. 637 per square mile.

Maintenance scheme. (1892—1906.)

The subject of the maintenance of settlement records in Orissa and of the organization of a land records establishment for this purpose was discussed from 1892 onwards, and a scheme was proposed to the Government of India in 1900, which after revision and alterations in 1903 and 1905 was tried experimentally in 1905. The Government of India proposed that the question of maintenance of records in other parts of the province should be left until the result of the experimental maintenance adopted in Orissa was seen.

Revision (1906-12.)

The experiment showed that it was necessary to bring the records up to date before any scheme of maintenance could be introduced, and the revision settlement was undertaken to clear the way for a continuous maintenance of the record-of-rights. This revision commenced in 1906 and ended in 1912, at a net cost of Rs. 11,66,275, or Rs. 211 per square mile. Many changes were found since the settlement of 1897. The multiplication of estates and holdings, the existence of a great number of petty revenue-free proprietors and the small size of plots combined to make the operations

complicated and difficult. The record was revised for 91 lakhs of plots and 23½ lakhs of tenancies and rents were settled for 24,592 tenancies.

Maintenance.

The work of annual maintenance was commenced in 1908-09 in the temporarily-settled portion of the sadr subdivision of Balasore district, containing 2,312 villages with an area of 962 square miles. Sixty-four recorders, who were nominated by the presidents of the chaukidari unions, were appointed for the work. Annual maintenance was not a success from the start, but was continued until 1911 when it was dropped in favour of an alternative scheme of triennial maintenance. This however proved no more successful. It was found to be costly and cumbrous, difficult to control and harassing to the people. Finally in 1915 the operations were closed under the orders of the Government of India and maintenance was abandoned.

Revision settlement.

The revenue settlement of Orissa of 1897 was for thirty years, and a resettlement has now begun. The opportunity is being taken at the same time of making a survey and preparing a record-of-rights in those parts of the districts in which no authoritative record has hitherto been prepared, of which the principal tracts are the Kanika and Kujang estates in Balasore and Cuttack.

Settlement operations in Khurda.

The Government estate in Khurda in Puri district until 1837 was settled *mahalwari* on rough estimates, the persons admitted to engagement being the village headmen called sarbarakars. In 1837 a regular raiyatwari settlement was made for 20 years, each raiyat receiving a lease and the sarbarakars being allowed a commission of 20 per cent. on the collections. The settlement was renewed in 1857 for like period. In 1875 preparation began for a revision of settlement which met with much opposition from the raiyats. The Government ultimately reduced the revenue demand from a nominal basis of one-quarter to one-fifth of the gross produce, and limited the period of settlement to 15 years, terminating in 1897. A further settlement for a period of 15 years was made in 1897, in which the maps of the last settlement were revised and new cultivation plotted on them. The existing revenue of Rs. 2,84,556 was raised to Rs. 3,46,427, the greater portion of

this increase being obtained by means of a general enhancement of rents by three annas in the rupee on the ground of the rise in prices of staple food crops since the previous settlement. The cost of these operations was Rs. 1,90,000 or 5 annas 4 pies per acre.

The records of the settlement were kept more or less up to date through the agency of the sarbarakars and a special staff periodically retained for the purpose, and the records thus maintained were utilized after further scrutiny to form the basis of the resettlement operations of 1912-13, the settlement of 1897 having expired in 1911.

Resettlement in Khurda, 1912-1913.

The total area under resettlement was 883 square miles. A record-of-rights was prepared for 213,652 tenants and fair rents were settled for 188,749 tenants including under-tenants. An enhancement of rent was made by two annas in the rupee solely on the ground of the rise in prices of staple food crops. The gross land revenue demand (excluding forest and road cess) was raised from Rs. 3,86,471, the recorded demand in 1911, to Rs. 4,33,512, and the net demand from Rs. 3,18,199 to Rs. 3,51,229, resulting in a net increase of Rs. 33,030 of a little over 10 per cent.

The Banki Government estate in the Cuttack district has an area of 117 square miles. It was formerly a tributary estate but was confiscated by the Government in 1839 owing to the misconduct of the Raja. The first two settlements of the estate in 1844 and 1854, were based on an indigenous system of measurement, the third settlement in 1888 was proceeded by a plane table survey, in the course of which maps showing all fields were prepared. In 1905-06 a resettlement of the estate was made for 15 years, and the gross rental raised to Rs. 38,218. Revision operations with a view to resettlement of the estate commenced in October 1917, and took roughly two years and a half to complete. Rents were enhanced by annas 2-9 in the rupee on the ground of the rise in prices. Deducting the remuneration to sarbarakars at the existing rates of commission, the ultimate net revenue came to Rs. 41,847, against Rs. 35,031 of the 31st March, 1920, and Rs. 34,389 of the last settlement. This resettlement was confirmed for a period of 15 years from the 1st April, 1920.

Banki.

Sambalpur was transferred to Bengal from the Central Provinces in 1905, and became part of this province at its formation in 1912. The revenue and tenancy law in force is the Central

Provinces Code as it stood in 1905. Since then new Land Revenue and Tenancy Acts have been passed in the Central Provinces and the Settlement Code has been considerably altered. Sambalpur has thus been left under a law of its own. It is a temporarily-settled district consisting partly of a khalsa area which is a Government estate, and partly of zamindaries. In the khalsa area the village headmen, called gaontias, have proprietary rights in their home farms and collect the rents of the tenants which are paid to Government. Under the Central Provinces system the district has a land records staff and the record is maintained by the agency of patwaris and revenue inspectors. As the corrections made on the old maps were becoming inaccurate, this staff was employed to re-survey the district, and the re-survey and the preliminary record-writing was completed between 1914 and 1919, the area covered being 3,227 square miles, and containing 7,153,080 plots. A Settlement Officer was appointed in October 1921, and attestation began in January 1922, and is now in progress. The settlement will be finished in 1926. It is intended, after the completion of the settlement to frame a self-contained code of revenue and tenancy law for the district.

Sambalpur.

(b) *Settlement operations in Bihar.*

In accordance with the view taken by Government that for the adequate protection of the several interests of those connected with land, whether as owners, as the holders of intermediate tenures, or as cultivators, legislative measures should be supplemented by the preparation of a full record-of-rights founded on an accurate survey, provision was made in the Bengal Tenancy Act of 1885 for the survey and preparation of record-of-rights in any local area. Such operations were held to be specially required in north Bihar, where the condition of the cultivators had long been admitted to be unsatisfactory. The district of Muzaffarpur being one in which the relations of the people to the land were the least satisfactory, survey operations of an experimental nature were undertaken here under chapter X of the Tenancy Act in 1885, with the intention that they should be subsequently extended to a wider area if found successful. The experimental operations were

Experimental survey in Muzaffarpur.

terminated in 1886 after a record-of-rights had been published for 235 villages. These operations, however, proved that the province generally might be protected by an accurate survey and a record-of-rights with little trouble, and at a cost moderate in proportion to the area dealt with, and led to the undertaking in 1891 of operations on a more extensive scale in north Bihar.

Settlement programme in Bihar.

The objects and intentions of Government in carrying out the undertaking in north Bihar were explained in Resolution No. 1243-L.R., of the Bengal Government, dated the 9th November, 1891. Work was resumed in Muzaffarpur in November 1891 in continuation of the work done in 1886, and Champaran was taken up in the same year. The settlement was continued through the districts and parts of districts of Bihar north of the Ganges in the following order: Saran, Darbhanga, north Monghyr, north Bhagalpur and Purnea. The settlement of south Bihar was then taken up, the order of the work being south Bhagalpur, south Monghyr, Patna, Shahabad and Gaya. With the completion of Gaya in 1918 the original settlement operations of Bihar came to an end, but in the meantime a revision programme had been started.

Revision.

As it was the fixed policy of the Government of India that a record-of-rights once prepared must, is not maintained, be periodically revised, the question of revising the Bihar records, engaged the attention of the Bengal Government in the first decade of the present century, and it was decided to take up the work in 1912. Revision operations actually began in the Champaran district in 1913, and were completed in that district in 1919. In Saran the revision was begun in 1915 and finished in 1921. The next district to be taken up was Muzaffarpur, but the settlement there has been temporarily postponed.

The original settlement in Purnea, north Monghyr and Bhagalpur were described in the administration report for 1911-12, and an account is given below of some of the operations concluded during the last ten years.

Shahabad.

Shahabad has an area of 4,353 square miles, of which 4,232 square miles came under survey and settlement, the balance being tracts

previously surveyed and settled, town sites and diara areas topographically surveyed. The operations extended from 1907 to 1916, and the area dealt with comprised 683,586 holdings and 3,718,423 plots. The district is naturally divided into four distinctive tracts, *viz.*: (1) the Ganges diara tract, (2) the central plain, (3) the Kaimur hills and (4) the upper Sone valley. These tracts differ from each other so much in such features as fertility of the soil and density of population as to reduce considerably the value of any deductions based on averages obtained by totalling the statistics for the whole district. Of the total area under settlement 64 per cent. was found to be cultivated, 8 per cent. uncultivated but culturable, and 26 per cent. unculturable; but were it not for the large area of unculturable land in thanas Sasaram, Dehri and Mohania, the proportion of cultivated area to total area would be much higher, the percentage in the remaining thanas being over 80 as in the Patna district.

Fair rent settlement was carried out on an extensive scale. Rents were settled for 51,906 holdings situated in the permanently-settled area. The total cash rental dealt with was Rs. 775,912, and the settled rents amounted to Rs. 838,349, the percentage of increase being 8·04. In addition rents were settled under section 104, with a view to resettlement of revenue, in nearly all Government and temporarily-settled estates, numbering 580 and paying a revenue exceeding one-sixth of the total land revenue of the district. For these estates Government accepted the principle that the standard of one-fifth of the gross produce should be regarded as a maximum beyond which the existing rents ought not ordinarily to be enhanced either on the ground of rise in prices or on any other ground. The total cash rental dealt with was Rs. 2,75,501, which was raised to Rs. 3,02,799 an enhancement of 9·9 per cent. The same principle of using one-fifth of the gross produce as a test of the fairness of a rent was applied in settling fair rents under section 105 in the permanently-settled estates.

The area held on produce rents by occupancy raiyats was 255,850 acres, or over 20 per cent. of the total area held by such raiyats, as against 44 per cent. in the Patna district. There were 4,613 applications for commutation of produce rent during the progress of the operations, of which 3,411 were allowed. The

average rate fixed in commutation cases, Rs. 5-1-7 per acre, exceeded by 25 per cent. the average rate paid for lands held on cash rents.

Of the land cultivated by raiyats 17 per cent. was found to be held by raiyats at fixed rates of rent, and 82 per cent. by settled and occupancy raiyats, the average cash rent paid being Rs. 4-1-0 per acre.

Guzashtadars in Shahabad.

One of the most important and most interesting issues in Shahabad was the position of the large body of raiyats known as *gazashtadars* who are congregated in a well-defined area in the north of the district and were remarkable for the fact that they had hitherto successfully resisted any attempt on the part of the landlords to increase their rents. The treatment of these *guzashta* tenancies was given the most careful consideration, and the principles applied were approved by Government with the result that the distinction between the genuine *guzashtadar* and the occupancy raiyat has been maintained.

The financial results of the resettlement of revenue in Government and temporarily-settled estates are given in the table below :—

Previous settlement.		Present Settlement.	
Assets.	Revenue.	Assets.	Revenue.
Rs.	Rs.	Rs.	Rs.
3,40,712	2,12,105	3,72,901	2,46,550

The total net cost of the operations came to slightly under 14 lakhs of rupees, the net cost-rate coming to Rs. 318 per square mile.

Gaya.

The operations in Gaya covered practically the entire area of the district which is 4,748 square miles, and included the tracts for which maps and records were already in existence, namely, the Belkhara Mahal,

the Maksudpur, Deo and Tikari estates. Of the total area 60 per cent. was found to be cultivated, the percentage in the Jahanabad subdivision being over 80; 55 per cent. of the total cropped area was irrigated. The revenue in 1916-17 amounted to Rs. 14,83,775, which represents an average incidence of 7 annas 3 pies per acre, the fourth highest incidence in Bihar, the districts with higher assessments being Muzaffarpur, Saran and Patna. Of the total revenue of the district 90 per cent. is derived from permanently-settled estates, 3 per cent. from temporarily-settled estates and 7 per cent. from Government estates. Eighty square miles is held revenue free. The number of revenue paying estates, which in 1870 was 4,400, has since then increased by partitions to 9,000, and the increase is still in progress.

Fair rents were settled in 1,517 cases comprising 14,861 holdings, most of the enhancements being given on the ground of rise in prices. Before granting an enhancement the precedent set in Shahabad was followed, and a special investigation was made of all villages in which the existing rents exceeded on the average the value of one-fifth of the gross produce. The net result of the fair rent proceedings was to increase the existing rent-roll by over Rs. 20,000. The average incidence of the cash rents paid by raiyats with rights of occupancy is Rs. 6-1-1 per acre, the only Bihar district in which this is exceeded being Patna, where the incidence is Rs. 7-8-0.

In view of the prevalence of produce rents and the prospect of having to deal with numerous applications for their commutation, special attention was given to crop-cutting experiments, and altogether 11,000 experiments were made.

Produce rents in Gaya.

The two great economic problems of Gaya are produce rents and irrigation. The area held on produce rents in Gaya constitutes 68 per cent. of the total area held by raiyats with rights of occupancy, a percentage which exceeds the figure for any other Bihar district, Patna coming second with 44 per cent. The Gaya settlement has thrown much light on produce rents, a subject which is of the greatest importance throughout south Bihar. A full account of produce rents and irrigation will be found in chapters X and XI of the final report of the Gaya settlement.

There are two main kinds of produce rent, *batai* which is a division of crops and *danabandi* which is appraisement. Now-a-days landlords prefer the latter and are attempting to substitute it for the former, which is preferred by the raiyats. It appears that in the past the reverse was the case, since as long as the landlords were unable in practice to realize rents by court process, they only permitted raiyats whom they could trust to pay to dispose of the crop before the landlord's share was paid. Landlords have also been attempting to raise their nominal share of the produce from ½ to 9/16 or even higher. It has been shown that the produce of land held on produce rent is 10 per cent. below that held on cash rent, and that 10 per cent. of it is left fallow every year against 5 per cent. of cash rented land. Also that where the landlord's share is in theory half the produce, customary remissions and payments reduce it to 40 or 45 per cent. and that where the landlords' papers were produced the realizations did not on the whole exceed 25 per cent. of the gross produce. The reluctance of the landlords to produce their papers, and the pitch of *chakath* rents—produce rents temporarily commuted to cash—which are not much higher than cash rents and are little over 25 per cent. of the gross produce, both support the conclusion that the landlord has not in actual fact been able to collect more than a quarter of the gross produce, where his nominal share is half. The south Bihar system of produce rents is, indeed, in its essentials, a system of fictitiously high rents under which a raiyat, should he refuse assent to his landlord's demands, is liable to be sued for a rent which the latter does not in ordinary circumstances attempt to collect and which, presumably, is too high to be regularly paid. Moreover, as rent receipts are seldom given for produce rents, it is difficult for the raiyat, if the *danabandi* system is in force, to discharge the onus, which lies on him, of proving payment in suits for arrears. That the raiyats dislike produce rents and would commute them if the cash rent to which they are commuted is payable, and that the landlords often resist commutation is clear. To what extent and on what principles commutation should be allowed, and what effect commutation will have on the maintenance of the irrigation works are questions of great difficulty. Forty-two per cent. of the cultivated area is irrigated from private sources, and this irrigation is controlled by the landlords, an inter-dependent irrigation system being frequently under the joint control of the

landlords of several estates. Out of 13,331 applications for commutation filed during the operations, only 2,733 were disposed of by the Settlement Department, and the rest were under the orders of Government transferred to the Collector.

Since the close of the settlement operations 29,818 more applications for commutation have been filed. Up to date 16,212 have been allowed and 13,606 refused, in many cases on the ground that the irrigation system which serves the holding is too complicated to admit of the withdrawal of the stimulus to adequate maintenance by the landlords which the produce rent system affords. The possible economic effects of a rapid transference from the system of produce rent, which gives the landlord a strong pecuniary interest in the upkeep of irrigation, to the system of cash rent, under which that interest ceases, have been viewed with grave apprehension by many persons qualified by their experience of the district to judge. The private Irrigation Act, Act V of 1922, was passed primarily to enforce the obligation of landlords to maintain irrigation but it is yet too early to say whether that object will be secured after their personal interests therein have been diminished by commutation.

Irrigation system.

The irrigation system in Gaya formed the subject of careful investigation by the officers of settlement, and in each village a record was prepared of each irrigation work showing who constructed it and whose duty it was to maintain it, the area and position of the land irrigated from it and any special customs regarding it. For *pains* (channels) which affected more than one village a descriptive record was prepared showing the arrangements made for getting the water into the *pain*, the rights of the various villages in the water and the arrangement for distribution.

Cash rents.

The cash rents paid in Gaya can be divided into two important classes, *chakath* and *shikam*. Under the *chakath* system a landlord who for any reason finds it inconvenient to appraise or to divide the produce of lands paying produce rent agrees with his raiyats that rent shall, for a period of years or occasionally for an indefinite period, be paid in cash at specified rates per bigha. The *shikam* rents were believed to be not enhancible like the *guzashta* rents in Shahabad. In Gaya, however, the tendency of the older classes of privileged raiyats to

merge into the more numerous body of occupancy raiyats has operated to the detriment of the former, and the tradition of the non-enhancibility of *shikam* rents where it has not been actually violated, is fast being forgotten. The result is that outside the Tikari estate, where the *shikam* rents were found to be fixed, the *shikam* raiyats of the district have in general failed to prove fixity of rent and have been treated as ordinary occupancy raiyats.

The total cost of the settlement operations was Rs. 18,38,356, the cost-rate per square mile being Rs. 388.

Champaran revision settlement.

The Champaran record-of-rights was completed in 1898, and the revision operations were taken up in 1913 and finished in 1919. It was at first thought that the old maps and records could be brought up to date by merely correcting the field boundaries and showing the new fields in the old maps, making the necessary alterations in the old records and preparing fair copies after correction. But the changes both in boundaries of fields and in their ownership, which had taken place in fifteen to twenty years, were so numerous as to render this course impracticable, and it was found necessary to prepare entirely new maps and to re-number the fields. A noteworthy fact is that the cultivated area of the district has not increased since the previous settlement, and has in fact, decreased by some 10,000 acres on a total of 1,440,000 acres. This is all the more noteworthy, since, after excluding current fallow, the area found to be cultivable but uncultivated is 18 per cent. of the whole. It appears from the census figures of 1891 and 1911 that the pressure of population on the soil scarcely increased during the period, while during the decade 1911 to 1921 it has increased only by 1·7 per cent.

Changes in distribution of crops.

Some of the more important changes in the distribution of crops since the last settlement were (1) the practical disappearance of indigo, the area under which has fallen from 95,970 acres to 8,872 acres, and (2) the increase of area under sugarcane from 10,330 acres to 19,687 acres. The number of estates has increased from 1,229 to 1,349, the slow rate of increase being due to the fact that most of Champaran is included within four large properties, *viz.*, the Bettiah, Ramnagar, Madhuban and Sheohar estates, and consequently collectorate partitions are few in number.

The revenue assessed on the district, Rs. 5,15,135, represents less than one-eighth of the assets enjoyed by the proprietors, and is equivalent to an average rate of 3 annas 7 pies per acre.

Incidence of rents.

The area in the direct cultivation of proprietors and tenure-holders has decreased by over 40,000 acres, and the area held by raiyats with rights of occupancy has increased by over 100,000 acres or 8 per cent. The total of cash rents payable by raiyats has risen from Rs. 24,63,420 to Rs. 29,28,428, and the area held on produce rent has fallen from 69,386 to 66,304 acres. The rent incidence has risen from Re. 1-13-9 per acre at the last settlement to Rs. 2-2-5 at the time of attestation in the revision operations. Rent settlement, including commutation of produce rents, have raised this incidence to Rs. 2-4-0. With the exception of Purnea no district in Bihar has a lower rent incidence.

The settlement provides a means of solution of agrarian disputes.

The most notable achievement of the Champaran revision settlement is the part it played in facilitating a solution of the very difficult agrarian problems which have existed in the district for the past half century. The district had been for many years the scene of agrarian unrest, and this became so acute during the course of the revision settlement that Government were obliged to appoint an Agrarian Enquiry Committee. The chief causes of dispute were (1) the levy of illegal additions to the rent (*abwab*), called by various names, the most common being *pain kharcha* or water-tax, which was prevalent in the north of the district, and (2) the exaction of compensation (locally called *sharahbeshi*) for the release of raiyats from the supposed obligation to grow indigo, which had been carried out in most of the remaining area before the operations started. The labours of the Settlement Officer had exposed the extent of the practice of taking *abwabs*, and that practice had been definitely prohibited throughout the area concerned by orders of Government passed before the appointment of the committee. So far as the second cause of dispute came into play the settlement operations had discovered all the relevant facts, which rendered it possible for the committee to submit the practical recommendations of compromise which were accepted by Government and given effect

to in the Champaran Agrarian Act, 1918. The Act released the raiyats from all obligations to grow indigo or other special crops on their holdings, and effected an equitable arrangement regarding the additional rent payable in return for this release. It prevented the revival of any such system, and limited the possible contracts for the supply of commercial crops to landlords by their raiyats to agreements, which may not extend beyond three years, to deliver a definite weight of crop.

Champaran Agrarian Act.

The other major causes of friction between landlords and tenants in the district were (*a*) the restrictions on transfers of holdings, (*b*) the disputes regarding trees planted by raiyats in their own holdings, and (*c*) the insufficiency of grazing land. The first two have already been considered by the Bihar Tenancy Act Committee and formed the subject of two clauses in the Bihar Tenancy Amendment Bill which was introduced in the Legislative Council but was withdrawn in view of the failure to secure a substantial measure of agreement between the different interests involved. The question regarding grazing lands was considered by the Agrarian Committee, whose view was that it was advantageous that some land should be left for communal use. The Settlement Officer has, however, pointed to the conditions prevailing elsewhere in north Bihar, where cattle are mainly trough-fed. The best solution from an economic point of view may well be this, since the existing waste land, or at any rate what remains after the provision of a minimum area for exercise grounds, should ordinarily be capable of more economic use when under crop, including fodder cropping for silage, than as ordinary pasture.

Cattle grazing.

Applications for settlement of fair rents under section 105 were made in respect of 40 per cent. of the total number of holdings, and the result was an enhancement by 12 per cent. of the total rental of the holdings dealt with. The number of commutation cases disposed of was 2,696.

The net cost of the revision operations was Rs. 8,19,141, nearly one lakh less, owing to the increase of receipts from court and copying fees, than the cost of the original survey and settlement which was Rs. 9,14,655.

Cost of the settlement.

Saran revision settlement.

The revision operations in the Saran district began in October, 1915, and were completed by March, 1922. The area, 2,457 square miles, was practically the same as in the original operations, the only changes being the addition of a few diara villages which had become stable, and the exclusion of a few villages dealt with in separate minor operations since the original settlement of the district. The total cultivated area as found in the revision settlement was 1,298,234 acres as against 1,284,010 acres in the last settlement, the total number of plots being 5,881,338 against 4,831,923, an increase of 17·8 per cent. The most striking economic change was the disappearance of indigo manufacture, the area under indigo being only 7,904 acres against 45,513 acres during the previous settlement, and the rise in the sugar industry—the area under sugarcane being 64,245 acres in the revision settlement and 36,535 acres in the previous settlement.

Absence of agrarian dispute.

The outstanding feature of the revision in Saran as compared with that of Champaran was the absence of any acute tension or general cause of dispute, and the comparatively small changes required in the record, this being due to the fact that the raiyats of Saran are well alive to their rights and have been able to protect themselves against the infringement of these.

The area held by raiyats under produce rent was only 42,578 acres or 3·7 per cent. of the total area held by raiyats, having fallen by 6,571 acres since the previous settlement. A further 2,650 acres has been commuted during the settlement. The cash rental has risen from Rs. 4,878,960 to Rs. 5,133,021. The incidence of cash rent in Saran was Rs. 4-7-0 per acre (as attested), against Rs. 2-2-5 in Champaran, Rs. 3-13-5 in Muzaffarpur, and Rs. 3-12-4 in Darbhanga.

The most important question that arose was the settlement of fair rents under section 105. The total number of tenancies dealt with was 318,919, whereas the number at the last settlement was 65,041 only. The increase allowed was 10·90 per cent. In the sadr subdivision where rents were already very high it was found necessary to modify under section 35, Bengal Tenancy Act, the enhancement that was permissible under section 32.

The total net cost of the revision operations was Rs. 13,04,028, whereas the net cost of the original operations was Rs. 11,14,491. The increase is more than accounted for by the rise of prices.

Between 1898 and 1905 the area which came under settlement in the Santal Parganas was 3,498 square miles, comprising :—

Santal Parganas.

(1) 812 square miles of zamindari estates known as the first programme.

(2) 1,097 square miles of the Damin-i-koh Government estate which was resettled.

(3) 1,589 square miles of zamindari estates known as the second programme.

During 1906—1910 a further area of 1,590 square miles (known as the third programme) settled between 1888 and 1894 was taken up for revision and settled. These operations completed the survey and settlement of practically the whole of the district excluding the unsurveyed Paharia tracts in the hills of the Rajmahal and Godda subdivisions which were settled in 1914—16.

A revision survey and settlement of the whole district has been taken up in 1923-24, and according to the present programme the operations have been finished :—

(c) Settlement operations in Chota Nagpur.

Chota Nagpur.

The settlement operations were started in Ranchi as a remedy for the unrest among the aboriginals of that district which was mainly agrarian. They were at first confined to the Munda country in Ranchi, but were extended to the rest of that district and later to the whole division. In the following areas which cover practically the whole division except a portion of the Manbhum district settlement operations have been finished :—

Ranchi district 1902—1910, Singhbhum pargana Dhalbhum, Hazaribagh district (excluding the Koderma Government estate which had been settled in 1902—04 under the Bengal Tenancy Act), Manbhum parganas Barahabhum and Patkum, Palamau district, Singhbhum Kolhan Government estate, Manbhum—rest of the district. In pargana Porahat of Singhbhum a survey and settlement was done in 1900—02 and a record of Khuntkatti jungle and

other rights was made subsequently in 1905—07 under the Bengal Tenancy Act.

The settlement operations in Ranchi were described in the administration report for 1911-12 and an account of some of the more recent operations is given in the following paragraphs.

Hazaribagh.

Hazaribagh differs from Ranchi in that it is now occupied for the most part by Hindus and Muhammadans who are classed as non-aboriginals. Less than a third of the population is aboriginal, while in Ranchi more than three-fourths of the cultivators belong to the aboriginal tribes. Of the total area of the district, which is 6,989 square miles, a record-of-rights was prepared for 6,878 square miles, the Koderma Government estate and forest being excluded as they had been already surveyed in 1902. The total area recorded as cultivated was 2,019 square miles, 16 miles as current fallow, 1,895 as culturable waste and 2,948 as unculturable.

Agrarian conditions in the north-west of the district.

Agrarian conditions were found to be worst in the north-west of the district, *viz.*, in Huntergunj and Partabpur, where the landlords had already succeeded in appropriating for their own cultivation 47 per cent. of the rice lands and 31 per cent. of the uplands by the usual methods. Rents were enhanced and levied at exorbitant rates. The tenancy law was a dead letter in this corner of the district, and many of the cultivators, owing to their inability to pay the rents assessed, were driven from the lands much of which they had themselves reclaimed from jungle. The land in the direct occupation of landlords was swollen and the former tenants were employed in cultivating it as *kamias* or serfs. The mass of people were thus reduced to economic dependence. A marked symptom of the depressed condition of agriculture in this part of the district was the fact that no tenant could obtain a loan on the security of his holding. Rents were so high that the tenants' right was worth nothing, the protection offered by the Tenancy Act against ejectment was illusory and the tenant relinquished his holding because he could not pay the rent. One good result of the settlement operations in this part was the prompt establishment of the Chatra subdivision which has done much to alleviate the condition of the cultivators in these tracts and to preserve such rights as they still retain.

The conditions found to prevail in these tracts are happily not prevalent throughout the rest of the district. The standard of living is undoubtedly low, but the tenants still enjoy, in addition to the produce of their lands, customary rights of user in the jungle which are of great value to them; rents, save in exceptional tracts, are by no means excessive; and there are opportunities which are not available in many other districts for earning fair wages in the coal-fields.

Agrarian conditions in other parts.

Applications for commutation of produce rents made by occupancy raiyats were seldom rejected. The Satgawan Gadi was the only estate in which produce rents were paid instead of cash rents by entire villages, the system being *danabandi* (appraisement). The commuted rents ran from Rs. 3 to Rs. 8 for rice land, and from As. 6 to Rs. 5 for upland.

Commutation.

Prædial conditions were not so universal as in Ranchi, and were commuted under the provisions of the Chota Nagpur Tenancy Act.

Fair rents were settled under sections 85(2)(*i*) and 85(2)(*ii*) of the Chota Nagpur Tenancy Act. The amount of rentals dealt with were Rs. 2,65,604 and Rs. 42,506 under the two sections respectively, which were raised to Rs. 3,13,388 and Rs. 46,404. A total enhancement was effected of 18 per cent. on the holdings in which the parties applied for a re-adjustment of the rent, or nearly 5 per cent. on the entire rental of the area. The average incidence of rent, as attested, on paddy land, and on total area, were in case of khuntkatti raiyats Re. 1-9-9 and As. 7, in case of settled raiyats Rs. 2-15-9 and Re. 1-1-2, and in case of occupancy raiyats Rs. 4-13-3 and Re. 1-5-3 respectively. Rents were also settled in the Hata Mahal Government estate comprising Hazaribagh itself and some 23 villages the result being to raise the former rent from Rs. 7,314 to Rs. 8,736, or by 20 per cent.

Settlement of fair rates of rent.

The total cost of the operations in the district was Rs. 17,41,057, giving a cost rate of Rs. 253 per square mile.

The total area of Palamau is 4,904 square miles of which only about 27 per cent. or 1,365 square miles is under cultivation. Fifty-five per cent. of this consists of uplands which only bear a crop

once in three years, about 25 per cent. of uplands capable of being annually cultivated, and only 20 per cent. of rice lands. Of the uncultivated area, which includes nearly three-fourths of the entire district, 300 square miles are reserved and protected forests. The balance, 3,240 square miles, consists for the most part of village jungles, of which about 2,000 square miles are reported to be unfit for reclamation. The figures confirm the conclusion of the Irrigation Commission that Palamau is probably the poorest district in Bengal, Bihar and Orissa.

Palamau.

The landlords, among whom are included the petty proprietors and tenure-holders, hold in their own possession 30 per cent. of the rice lands and 21 per cent. of the uplands, a very much higher proportion than they hold in any other Chota Nagpur district. The explanation is undoubtedly to be found in the prevalence of the *begari* and *kamiauti* systems. Of the total population of 700,000 the *kamias* and their dependents number 60,000, and a large proportion of the remainder is in a state of economic dependence only one degree better than that of a *kamia*. Whatever the origin of the system may have been (it has probably grown out of the slavery to which the Aryan invaders reduced the aboriginal inhabitants of the edges of the Chota Nagpur plateau), its continuance is perpetuated and its evils enhanced by the system of high rents, forced labour and lack of security of tenure which prevail in the district and the consequent discouragement of all agricultural development. The average holding of a Palamau raiyat is totally inadequate for the maintenance of his family.

High percentage of land in landlords' possession.

Kamiauti system.

The prevalence of the *kamiauti* system was one of the most important features of the district and engaged the attention of the settlement officers throughout the operations. The result has been to give the country the Kamiauti Agreements Act (Bihar and Orissa Act VIII of 1920). The agricultural labourers cannot now, thanks to that enactment, be driven by any stress of circumstances, to bind themselves or their families to work for a particular master at a particular wage for longer than one year.

Kamiauti Agreements Act.

Another remarkable feature brought to notice during the settlement operations was that, though Palamau is in fact the poorest district in the province, the incidence of rent on rice lands was higher than in any other district in the province, and certainly many times greater than in the adjacent districts of Hazaribagh and Ranchi. The Settlement Officer, on the ground that they contravened the provisions of the Chota Nagpur Tenancy Act, disallowed all private enhancements of rent made since 1901, and the Director of Land Records called attention in his inspection notes to the absolute disregard by the landlords of the provisions of the Act and to the effect of this on the economic condition of the raiyats. The landlords, realizing that the very existence of the system which had so long enabled them to ignore the tenancy law was at stake, presented memorials to the Lieutenant-Governor asserting that the settlement operations were being conducted in a grossly manner and improper spirit and in a manner highly prejudicial to their interests. On enquiry it was found that there was no ground for the charges brought against the Settlement Department, that the landlords' real grievance was that the Settlement Officer had applied the provisions of an Act which they had hitherto ignored, and that it would have been impossible, while applying that Act, to prepare a record-of-rights which would have satisfied the memorialists. In passing orders on the memorials Government held that the principles followed by the Settlement Officer were in accordance with the law, and that there was no reason to believe that his decisions had been generally other than correct.

High incidence of rent.

Application of Chota Nagpur Tenancy Act by Settlement Officers.

At the same time Government ordered a general settlement of fair rents to be made in the district, and pointed out that when this was being carried out the memorialists would have an opportunity of obtaining the correction of any mistakes which might have crept into the record. These orders directed a general settlement of fair rents in the second half of the district, the records of which had not been finally published. As regards the half of the district previously dealt with, the Deputy Commissioner was directed to submit proposals in consultation with the Settlement Officer and to select villages in which the pitch of rents indicated

Settlement of fair rents.

that some reduction was desirable, or in which the landlords' representations showed that an enhancement might reasonably be expected. As the settlement operations progressed it became increasingly evident that a general fair rent settlement must inevitably result in a reduction of recorded rents, since the average incidence was so high that a restoration, even in part, of the illegal enhancements excised during attestation could be expected in very few villages. Fair rents were settled for about 120,650 tenants.

Reduction of rental.

The net result of the fair rent settlement was to reduce the total recorded rental of the district by about 10 per cent. The landlords of the first half of the district asked for a settlement of rents by notification in 92 villages only, and in the vast majority of these their request was not for a general settlement of rents but for the enhancement of a few holdings. Little or no protest was made, either before the Settlement Officer or on appeal before the Commissioner as to the fairness of the rates adopted.

The total cost of the operations was Rs. 12,40,000. Of this Rs. 7,99,354 was recovered from landlords and tenants including the Local Government as landlord of the Government estate. The net cost-rate works out at Rs. 256 per square mile.

Barabhum and Patkum estates in Manbhum.

Parganas Barabhum and Patkum occupy the south of the Manbhum district and cover between them an area of 933 square miles. Each of these parganas constitutes one revenue-paying estate owned by a single proprietor. The interests of both the proprietors are looked after by a manager appointed under the Chota Nagpur Encumbered Estates Act. The value of the proprietary interest has, however, seriously depreciated from sub-infeudation, the Midnapur Zamindari Company, who held *patni* leases from the zamindar, being firmly established in Barabhum, while the Patkum estate is largely in the hands of *mukarraridars*.

Sub-infeudation.

The settlement of these estates was undertaken in advance of its time in the general programme of operations, as a record-of-rights was urgently needed for two objects :—(1) to safeguard the tenantry whose interests were threatened by the enterprises of the Midnapur Zamindari Company; (2) to clear up the question of *ghatwali* rights.

Both these objects were achieved as far as possible, and the settlement operations succeeded in clearing the *ghatwali* question for ever so far as concerns its historical aspect and also as regards the rights that now remain with the *ghatwals*. It has not, however, been decided what is the best course to follow with regard to the continuance of the *ghatwali* police system, and on the facts elicited it would appear that the time has not yet come for interference with the existing practice.

Ghatwals.

The total area covered by this settlement was 597,567 acres of which about 48 per cent. is cultivated, 17 per cent. capable of being cultivated, while the remaining 35 per cent. consists of rivers and unculturable hills. Of the cultivated lands half are terraced rice lands and the remainder uplands. Fair rents were settled for all headmen, *khuntkatti* raiyats, and raiyats holding under the *ghatwals*, whether applications were received from the parties or not. For other tenants fair rents were only settled on application. The total number of tenants for whom fair rents were settled was 13,791 in Barabhum and 5,394 in Patkum, the existing rents being enhanced by 27·25 per cent. and 25·71 per cent. in the two estates respectively.

Settlement of fair rents.

The cost of the operations amounted to Rs. 3,03,481, Rs. 325 per square mile or 8 annas per acre.

The Kolhan Government estate is a compact block in the Singhbhum district, 1,919 square miles in area of which 537 square miles are reserved and 244 square miles protected forests. It is peopled mainly by the aboriginal race of Hos. The two early settlements of the estate in 1837 and 1854 were not based on a detailed survey, and rents were assessed at a certain rate per plough. In the third settlement 1867 a regular survey was made and rice lands only were assessed. In the settlement of 1897 both the rice lands and uplands were assessed, and the existing rent-roll of Rs. 64,828 was raised to Rs. 1,82,032, 80 per cent. of the total increase being due to extensions of cultivation.

The Kolhan Government estate.

The recent settlement which covered an area of 1,367 square miles (excluding the Chaibassa town, a lakhiraj tenure and the reserved forests), and which commenced in October 1913 and was

completed in December, 1919, raised the gross rental of the estate from Rs. 1,82,032 to Rs. 2,52,351, *i.e.*, by 38 per cent. Of this sum Rs. 4,445 is received by the owners of *lakhiraj* villages and Rs. 69,309 is taken as commission by the Mankis and Mundas who collect the rents. Government receives a net income of Rs. 1,77,597. The rents paid by the Hos are very low, and do not exceed 3 to 4 per cent. of the annual value of the normal gross produce of their lands. A comparison of the figures of this settlement with those of the previous settlement shows a 29 per cent. increase in cultivation, 13·6 per cent. being in rice land and 50·4 per cent. in upland. The area now under cultivation is 671 square miles, 6·7 per cent. of which is artificially irrigated by small *bandhs* or *ahars* so common in Chota Nagpur.

Increase in cultivation.

Of the problems which arose in the course of the resettlement operations the most important was the effect of certain sections of the Chota Nagpur Tenancy Act of 1908 on the system of administration of this large and peculiar Government estate, which had, up to the time, been regulated by executive rules framed to preserve the tribal system of administration through Mankis and Mundas and to prevent foreigners from obtaining a footing in the estates and ousting the aboriginal inhabitants. The local officers feared that the introduction of the Chota Nagpur Tenancy Act would render it difficult, if not impossible, to enforce these rules in future, and recommended that a special Act should be passed legalising the principles of the administration. Government, however, did not consider that these fears were justified.

The total cost of the operations was Rs. 3,43,025, or $6\frac{1}{4}$ annas per acre. With the exception of a sum of Rs. 1,822 recovered from the owners of *lakhiraj* villages, the whole of this cost was borne by Government.

Apart from the benefit to landlords and tenants of having a precise and authoritative record of their rights, settlement records are of marked utility in every branch of local administration. Disputes about possession in the criminal courts (in districts which have been surveyed and settled) have been considerably simplified, as the record shows who was in possession at the

Utilization of Settlement records.

time of settlement, a useful and definite fact, and as the mauza map gives a separate number to every plot, the disputed area can be defined and expressed with accuracy. The records are used with equal facility and advantage in revenue work. They are referred to in commutation cases under section 40 of the Bengal Tenancy Act. In land acquisition cases valuations are made on their basis, and in partition, land registration, and cess revaluation, in fact in all the branches of a Collector's work, the settlement records afford a precise and reliable working basis. As part of the Government policy that they should be utilized to an equal degree by the civil courts a scheme was adopted some years ago for training munsifs in settlement work. Under this scheme some of the younger munsifs are selected every year to undergo a course of training in settlement lasting eighteen months. The experiment has proved a decided success and has led to a fuller appreciation in the civil courts of the accuracy and value of the settlement record than was previously the case.

CHAPTER IX.

General System of Public Instruction.

At the time when the last decennial report was written, the province of Bihar and Orissa had only recently been separated from Bengal and the educational administration was necessarily proceeding on the lines which it had inherited. So far as higher education indeed was concerned the province still remained under the jurisdiction of the Calcutta University.

Separation from Bengal.

The past ten years have seen many changes, based mainly on the recommendation of a series of committees appointed by Government in the years 1913 and 1914. These are detailed in the subsequent paragraphs. It should also be mentioned that, whereas in the past a certain amount of money was spent by Government on schools in the Feudatory States and statistics for such schools used to be given in the departmental reports, statistics for the Feudatory States have not been included after the year 1913-14, while one of the effects of the Reforms has been to render expenditure from provincial revenues on schools in the States illegal, so that if any expenditure is incurred under this head, it must be recovered either from the Imperial Government (as was the case in respect of the pay of the inspecting staff in the States for the year 1921-22) or from the States themselves.

Changes during the last ten years.

During the first five years of the decade the number of public institutions rose by 2,621 and of their pupils by 87,223, while, though the number of private institutions declined by 679, the number of their pupils rose by 4,357. The following five years, however, showed a fall of 903 in the number of public institutions and 34,194 in the number of their pupils, while for private institutions the decreases in the number of schools and pupils were 763 and 449, respectively. The expenditure shows a steady increase from Rs. 53¾ lakhs in 1911-12 to Rs. 81½ lakhs in 1916-17, and Rs. 115 lakhs in 1921-22. The decrease in the number of schools and pupils during the past five years, in spite of the increase

Fluctuation in the number of schools.

in expenditure, is disappointing, especially as the report for 1916-17 was written under the shadow of the great war, while that for 1921-22 was written after the return of peace. The causes of the set-back are mainly the great increase in the cost of living, the non-co-operation movement, epidemics and to some extent the increase in the fee-rates in the high and middle English schools which was necessitated by the imperative demand for an increase in the pay of the teachers.

Directing and inspecting agency.

The directing and inspecting agency of the department consists of a Director and Assistant Director at headquarters, an Inspector in each Commissioner's Division and one for Angul and the Feudatory States, and a District Inspector and a number of sub-inspectors in each district. The Director is entitled to visit colleges and schools of all grades, and is specially concerned with the former and with the Reformatory School. The Inspectors are in direct charge of high schools and supervise also schools of lower status and the work of the inspecting officers subordinate to them. The duties of the District Inspectors are the direct charge of middle schools and supervision over sub-inspectors and the primary schools under them; in addition they are the educational advisers of the District Boards. Sub-Inspectors are concerned with primary schools only. In addition to this general staff there are two Inspectresses, one for Bihar and one for Chota Nagpur and Orissa, who are in charge of girls' schools and are helped by an Assistant Inspectress in each division. For Sanskrit education there is a Superintendent for the whole province with two assistants, while the special needs of Muhammadans are looked after by a Superintendent of Islamic Studies for the whole province, a special Inspecting Officer for Muhammadan education in each division, and seventeen inspecting maulavis. The aboriginal boys in the schools in the Santal Parganas are looked after by a special Deputy Inspector with seven assistants, while in Chota Nagpur there is a special staff of one Deputy Inspector and five assistants, while Monghyr has one sub-inspector for similar work. European schools are under the charge of a special officer who is also registrar of examinations and secretary to the Text-Book Committee. The chief changes during the ten years have been the appointment of an Assistant Director, an increase in the number of Inspectorships in the Indian Educational Service from four to six, the replacement of the Deputy Inspectors in the

Subordinate Service in charge of each district by better paid District Inspectors in the Provincial Service, the abolition of inspecting pandits and the appointment of a separate Inspector for European schools. Of the two additional Inspectorships in the Indian Educational Service, one was sanctioned for the Tirhut division, which has now a complete staff of its own, and the other for the Feudatory States. The pay of the last-named officer is now met mainly by the States themselves, though Government pay a proportion, as the officer's work extends also to the district of Angul.

Inspecting pandits abolished.

The abolition of the posts of inspecting pandits was made largely owing to the complaint that, since the pay of these officers was very low, they had a tendency to supplement their earnings by dishonest means, and it was thought that it would be better to replace them by a small number of additional sub-inspectors. When the province was established, the number of inspecting pandits was 253 and of sub-inspectors and assistant sub-inspectors 224. The former have now all been abolished, while the number of the latter is 275. The sub-inspectors and assistant sub-inspectors are all paid by Government, whereas the inspecting pandits were paid by local bodies. It may be noted that at present each sub-inspector has as many as ninety-one schools under his control.

Inspecting staff and local bodies.

Pay of staff.

The ten years have witnessed substantial improvements in the pay of the educational staff. Some of these were decided upon shortly after the province was created. Among other things, one post of Deputy Inspector in each district was replaced by a post in the Provincial Service, as already mentioned, and the headmasterships of Government high schools were similarly raised in status. The old Lower Subordinate Educational Service was abolished during the year 1917, the English teachers from it being placed in the Subordinate Service, and the vernacular teachers in a newly created and better paid service called the Vernacular Teachers' Service, to which also the head pandits of elementary training schools were transferred. Subsequently the general rise in the cost of living necessitated an increase in the pay of Government servants in all departments, including the Education Department. Orders regarding the Indian Educational Service were passed by the Secretary of State, and as regards the other services by the Local Government.

Teachers not in Government service have also received certain increases, though on the whole they have been less fortunate. In the year 1914 standard scales of pay were laid down for all secondary schools managed or aided by Government or by local bodies, while during the year 1921 a general increase was made in the fee-rates to enable salaries to be still further raised. The whole of the increase to be realized both from Government and aided schools was to be given as an increase in the grants-in-aid to the latter, but owing to the reduction in the number of pupils the increase has unfortunately been less than was expected. As regards primary schools, minimum stipends were prescribed during the year 1913, and the rates now in force are Rs. 9 for a trained teacher, Rs. 6 for one who has passed the middle examination, Rs. 3 for one who has passed the upper primary examination, and Rs. 2 in other cases. Though these stipends are in many cases supplemented by fees and casual receipts, they are admittedly too low. Unfortunately the resources of the local bodies, though substantially increased during the period under review by the surrender to them of the public works cess, are by no means elastic, and it seems impossible to grant any substantial relief to the teachers unless further funds can be made available from provincial revenues, or some form of education cess can be imposed.

Pay of teachers in primary schools.

The scheme for the university at Patna formulated by the committee appointed in 1913 led to legislation four years later. The object of the Patna University Act was to provide the new province with an university primarily of the residential and teaching type. But, "in view of the existence of colleges in other parts of the province and the local feeling in favour of their retention, it was decided that the university should comprise colleges situated at centres other than Patna." The scheme was first considered by a committee of seventeen members, containing nine non-officials. This committee proposed a central university where six colleges (including the existing Patna, Bihar National and Training Colleges, a new Government college, a new mission college and a Sanskrit college) should be erected on a site near the capital of the province, boys resident in the city being provided for by a non-collegiate department. External colleges were for the present to be limited to the four

Patna University.

Report of committee.

existing institutions (to the exclusion of a small college at Monghyr). Honours, mastership and nearly all the science teaching above the intermediate was to be imparted at Patna only and by the university itself. The constitution was to comprise a large convocation to deal with general questions and legislation, and a council composed of the Vice-Chancellor (a whole-time officer), two *ex-officio* members, the principals of all colleges, whether internal or external, the dean of the non-collegiate students, six members of the staff nominated by the Chancellor and seven persons elected by convocation. The council was to be the executive authority, with power over the staff, arrangements for teaching and examination, conferment of degrees, etc. Its decision would not be subject to revision by convocation. The capital cost of the whole project was estimated at Rs. 92½ lakhs, the recurring cost at nearly Rs. 11½ lakhs or, allowing for present expenditure, fees, etc., over Rs. 6 lakhs net. These sums included not only the erection and maintenance of institutions on the central site, but also the thorough improvement, and in some cases the rebuilding, of the outlying colleges.

Bill introduced.

The report was published and circulated for criticism. The Bill, as finally introduced by Government into the Imperial Legislative Council, did not limit the external colleges to four (indeed the committee had contemplated a larger number in the future), but to institutions founded at the centres where those four colleges were situated. The constitution was modified to resemble that of the older universities—a senate of *ex-officio* and sixty ordinary members, of whom twelve would be elected and the remainder nominated by the Chancellor, and a syndicate of three *ex-officio*, four nominated and nine elected members. The whole-time Vice-Chancellor and the independent authority of the syndicate were retained.

Points of criticism.

Certain features of the measure met with opposition. This opposition mainly centred round the proposal that the syndicate (largely, though not wholly, professional) should exercise independent powers, the checks to be exercised by Government and the limitation of collegiate centres. Fears were expressed that popular control would be minimised, that Government control would be rendered overpowerful, and that an arrangement, intended to group colleges at centres where academic surroundings were possible and thus to prevent the growth of weak and isolated institutions, would stem

the development of higher education. Nor did other proposals escape criticism. The Act emerged from Council in a modified form. The idea of a central university site just outside Patna was retained; but in place of the non-collegiate department, one of the existing colleges was to be retained in the city as a non-residential institution. The second grade college at Monghyr was retained as a recognised institution; and though the number of approved centres remains five (including the university area at Patna), second grade colleges may be opened without restriction as to their location and, with the sanction of the Government of India, first grade colleges too may be established at other places. An important deviation from the provisions of the Act of 1904 is that whereby Government is deprived of its independent judgment regarding affiliation and disaffiliation of colleges, and its power of final decision is limited to those cases which have been forwarded with the approval of the syndicate and the senate. The powers of Government are curtailed in other ways also and popular control is increased. It is not expressly stated that the Vice-Chancellor shall be a whole-time officer of the university, though such has hitherto been the case in practice. The nominated element in the senate is cut down to a maximum of twenty-five members and the elected element raised to a maximum of fifty. In addition to the registered graduates, new electorates have been introduced—the teaching staff of colleges, graduate teachers of schools, associations and public bodies. The syndicate contains four *ex-officio* members and fourteen elected by the senate, of whom at least seven must be on the staff of the university or the colleges. Hence, while it will be preponderatingly professorial (the *ex-officio* members being the Vice-Chancellor, the Director and the principals of the two chief colleges), the nominated element is eliminated from the syndicate. Moreover, the independent powers of the syndicate have been narrowed, and acts done in connection with these powers may be revised by the senate on a joint reference made by not less than six members of the syndicate.

Act as passed.

The new university commenced its career on 1st October, 1917. Its regulations were drafted on the lines of those in force in Calcutta, but have been substantially modified from time to time, two important changes being the abolition of

Opening of the University.

the age-limit for matriculation and the institution of a system of supplementary examinations. In the matter of funds, the university has been unfortunate. The scheme was drawn up before the war in the days of liberal Imperial grants and it was hoped that the cost would be met by the Imperial Government. The war necessitated a postponement of such expenditure, and even after the war it was felt that some curtailment would be necessary. A modified scheme was therefore prepared, but before this could be financed, the Reforms were introduced, and the Government of India intimated that the Local Government would have to pay the whole cost. This has rendered it impossible to make any progress with the scheme for new university buildings except for the acquisition of a site. Meanwhile, doubts have been raised as to whether the scheme for transplanting the university some seven miles away from the present colleges was intrinsically sound, and the matter is being further examined.

The building difficulty.

While in this way the development of the university itself has been gravely hampered, it has fortunately been possible to proceed more or less on the lines recommended by the Patna University Committee in respect of the constitutent colleges, other than Patna College, and even at Patna College large additions have been made to the laboratories and hostels. For the colleges at Cuttack, Bhagalpur and Muzaffarpur, and for the Patna Training College, fine new sets of buildings have been completed, while St. Columba's College and the Bihar National College have been substantially improved. The new college buildings at Cuttack provide hostel accommodation for 416 students and 18 members of the staff and include a particularly good library paid for by the Raja of Kanika. The buildings will shortly be improved by the provision of electricity, thanks to the generosity of the Maharaja of Mayurbhanj. At Bhagalpur the hostel accommodation is for 284 students, and the Raja Bahadur of Banaili contributed Rs. 3¼ lakhs towards the cost of the building. At Muzaffarpur the hostel accommodation is for 122 students. In all these cases ample accommodation for teaching in arts has been provided on modern lines, while the laboratories at Cuttack are designed for degree work, and at Bhagalpur and Muzaffarpur for work up to the intermediate standard. St. Columba's College has also been provided with laboratories for intermediate work and

The constitutent colleges of the University.

its hostel has been extended. At the Bihar National College additional accommodation both for teaching and residential purposes has been provided, but in this case buildings have been acquired and are, therefore, naturally somewhat less suitable than if they had been erected for the purpose. The staff of all the colleges has been substantially strengthened. The Greer Bhumihar Brahmin College at Muzaffarpur has been taken under Government control so that of the nine arts colleges for men four are now managed by Government, four aided and one unaided: the grant to the Bihar National College has been raised from Rs. 400 to Rs. 2,400, and that to St. Columba's College from Rs. 1,000 to Rs. 1,600, while the college at Bhagalpur, which was unaided ten years ago, now receives a monthly grant of Rs. 2,250. The effect of these changes has been to raise the direct expenditure on arts colleges for men from Rs. 2,44,803 in 1911-12 to Rs. 7,20,697 in 1921-22, or from Rs. 185 to Rs. 340 per student. Mention should also be made of the fact that whereas ten years ago there were only informal post-graduate classes in history and economics at Patna, these classes have now been systematized and given a strong staff, while classes in English, mathematics, Sanskrit, Persian, physics and chemistry have also been opened. At Cuttack, the generosity of the Maharaja of Sonpur has recently led to the opening of first-graduate classes in english.

Second-grade colleges.

One of the most important recommendations of the Calcutta University Commission concerns the establishment of second-grade colleges or colleges teaching only up to the intermediate standard. Ten years ago the province had only one small college of this type, that at Monghyr. Shortly before the report of the Calcutta University Commission was published it was found necessary, in order to provide accommodation for the post-graduate classes at Patna, to remove the intermediate classes in arts from Patna College. These were transferred to the neighbouring collegiate school, which was re-named New College, and which now contains the intermediate classes of a college and the four highest classes of a high school. A similar arrangement exists in the college at Bihar, which was started in the year 1920 with the help of an endowment of Rs. 8,000 a year. The establishment of these colleges has raised a number of problems and their progress is being watched with interest.

New College at Patna.

Bihar College.

The Training College at Patna ten years ago admitted only twelve students and taught only up to the L. T. standard. It was soon seen that this provision was entirely inadequate for a whole province, and accordingly the college was enlarged so as to train forty students and to work for the B. T. degree. New buildings have been provided, including boarding accommodation for all the students. For some years the practice was to limit admissions to the college almost entirely to Government servants and teachers from aided schools, but this has now been modified, and half of the places are reserved for students who have just taken their decree or intermediate certificate and who intend to take up education later as their profession. This arrangement is more in accordance with the practice in other countries and is also cheaper, since persons already employed have to be given their full pay while under training. It is hoped that the arrangement will prove successful. Meanwhile, as the Patna Training College can supply only a small percentage of the trained teachers of English, required for secondary schools, the question of opening another Training College at Cuttack is under consideration.

Training College at Patna.

The Law College has gone through various vicissitudes during the last ten years, the buildings in which it was held having twice been acquired by the Medical Department. A new house has, however, recently been purchased for it. The number of students on the roll has risen from 71 in 1911-12 to 290 in 1921-22. The question of strengthening the staff, which has hitherto consisted of one whole-time and six part-time teachers, has been under consideration for some years. In July 1923, a second whole-time teacher will be added and the pay of the whole staff will be raised. Classes in law were added to the Ravenshaw College during the year 1920. For two years they failed to attract any considerable number of students, but a substantial increase has occurred during the year 1922, and it is probable that the classes will now justify the expenditure which they entail.

Law College.

In the field of secondary education for Indian boys, Government continue to rely mainly on private enterprise assisted by grants-in-aid, though in each district, except in Angul, a high school is maintained

Secondary education.

directly at Government expense. Of 119 high schools 23 are managed by Government and 63 are aided, and of 257 middle English schools Government manage 8 and aid 197. Middle vernacular schools, on the other hand, are mainly under direct management, for of 159 schools 2 are managed by Government and 109 by local bodies, the number of aided schools being 44. The attractions of English education are such that committees can ordinarily be found to manage high or middle English schools, but since vernacular education is less attractive and the fees paid for it are less, the opening of middle vernacular schools offers little incentive to private enterprise. Mention has already been made of the steps taken to improve the pay of teachers in secondary schools. Large sums were also spent during the ten years on the provision of new school and hostel buildings for these institutions, and many Government schools in particular are now well-equipped, though some of those under private management leave much to be desired.

Matriculation.

When the province was established, the right of recognising schools as competent to present candidates at the matriculation examination was exercised by the Syndicate of the Calcutta University, but with the establishment of the University of Patna an important change was made, the matter being left to the Director, subject to the proviso that should he desire to withdraw recognition from a school or to refuse it to a school which had applied for it, the question should be referred to the syndicate, and that in the event of a difference of opinion between the Director and the syndicate the question should be further referred to the Local Government for decision. The arrangement worked well for five years, and no case of difference of opinion between the Director and the syndicate occurred. Recently, however, a Board of Secondary Education has been constituted to control high schools including those with intermediate classes attached to them, and the Director's powers in this respect will now be exercised by this Board.

School leaving certificate.

Another matter of importance in connection with secondary education was the institution of a school leaving certificate examination. This examination was designed to prepare students for commercial or clerical careers or for further instruction in special

institutions. The examination at the end of the course was to be divided into three parts, namely, a scrutiny of the record of progress in school, a public examination, and, in the case of those candidates who fail in one subject only at the public examination, an examination conducted *in situ* by the Inspector, with such assistance as he might require, in order to obtain a final decision. Thus, while at the matriculation examination a student passes or fails on the written work done on one occasion, the new scheme, while giving due weight to a written examination, was also to take into account the work done during the period spent in school. The scheme was to be introduced in all Government high schools and in as many selected schools, aided or unaided, at stations where there are Government high schools, as might succeed in obtaining recognition. The first examination was held in the year 1921.

The examination was to be conducted by an Administrative Board assisted by a Board of Studies. The former was to consist of the Director and Assistant Director, *ex-officio*, together with eight members appointed by Government, of whom three were to be appointed on the nomination of the University and two were to represent recognised non-Government schools. At least three of the members were to be non-officials. The Board of Studies, which was to consist of eight members, was to be formed from among the members of the Administrative Board, together with such other persons selected by them and approved by Government as might be necessary. The University has agreed to accept the school leaving certificate as equivalent to a matriculation certificate, provided the candidate has passed in certain specified subjects.

Progress of the scheme.

The scheme thus described has not yet made any great progress, though the importance of including in the secondary school course subjects, other than those of a purely literary nature, is now generally recognised and a committee has recently been appointed by Government to consider how far vocational training can be introduced. The first school leaving certificate examination was held in 1921 when 216 candidates were presented by 27 schools, while in the following year 28 schools presented 313 candidates. These figures should be compared with the number of candidates at the matriculation examination in those years, which was 3,555 and 3,528, respectively. The matriculation examination has a prestige which

the school leaving examination has not yet acquired. It appears, too, that the maintenance of a school leaving certificate examination and a matriculation examination side by side involves an unnecessary duplication of work, and proposals are now under consideration for the establishment of a University Delegacy which might conduct both the examinations. This delegacy is to consist of the Vice-Chancellor as President, five members selected by the syndicate and five elected by the Board of Secondary Education.

Middle English schools.

Ten years ago middle English schools, *i.e.*, middle schools teaching the vernacular course and in addition English up to the same standard as boys reach after four years' study in high schools, were controlled by a number of different authorities, some being managed by Government, some by local bodies and some by committees, while of the latter again, some were aided by Government and some by local bodies. The Committee, which advised Government in the year 1914, as to the requirements of primary education, recommended that local bodies should henceforth cease to deal with such schools, for it was felt that there was a tendency to divert to them money which was more urgently required for primary education. Accordingly all middle English schools, formerly maintained or aided by local bodies, were converted into schools aided by Government during the year 1917. These schools are popular, and demands are frequently made for an increase in their number.

Middle Vernacular schools.

The middle vernacular schools, on the other hand, which provide a similar course, except that no English is taught, are as a rule unpopular, though their unpopularity has been to some extent checked by the institution of a public vernacular school leaving certificate examination at the close of the course. These vernacular schools, except schools for girls, are still under the control of local bodies which spend on them substantial sums. The question whether they should be further encouraged or whether all such schools should be converted into middle English schools is under consideration.

Primary schools.

The provision of primary education for the masses has long been regarded as one of the most important duties of Government, and has become more necessary than ever in India owing to the large number of voters recently enfranchised. Its progress in this province

depends very largely on the funds available. Of the 22,443 primary schools now in existence, only 860 are directly managed by Government or local bodies. The remainder are either managed by committees or are stipendiary schools, *i.e.*, schools started by the teacher on his own responsibility. Schools of the two latter classes depend for their permanence on the provision of the necessary income. In some villages substantial sums are secured in fees and in the shape of presents at different seasons of the year, and where this is the case, as it often has been in the past, this has encouraged committees to open schools or attracted teachers to open them as a private speculation. Recent economic conditions have, however, made it more difficult for the teachers to obtain casual assistance, while the grant of stipends is reported in many places to have made parents unwilling to pay any but very small fees, while, again, economic conditions have rendered it difficult for many parents to permit their children to go to school when by staying at home they could help with the work of the family. The abolition of fees would now no doubt lead to some increase in the number of pupils, but this could only be carried into effect if the teachers were compensated, and for this the necessary funds are not at present forthcoming. Meanwhile, with the fall in the purchasing power of the rupee, the teachers' stipends are in effect being reduced, and the result is seen in the fall of 831 in the number of primary schools for boys during the past five years. It is hoped that additional funds will be forthcoming shortly, and the question of popularising the schools by the introduction of a simpler curriculum is also under consideration.

and their buildings.

A great majority of the primary schools of the province are housed in buildings not intended for school use. Many are held in verandahs or other accommodation kindly lent by well-to-do persons, but such accommodation is seldom satisfactory. Verandahs are often exposed to rain and dust, while, if rooms are provided, these are seldom well lighted. Again, the children of backward classes are not always welcomed in accommodation of this kind, and in schools, which depend upon one man's favour, it is apt to be the case that some children receive more attention than the others. The problem of providing buildings is thus an important one, but even if the cheapest possible type of buildings is provded, the sum involved is very large, while the cheaper the buildings, the greater is the difficulty in keeping them in repair.

Mention has been made of the Patna Training College which trains teachers of English for secondary schools. Teachers of the vernacular for secondary schools are trained in the first-grade training schools, of which there is one at the headquarters of each division. These schools have until recently trained teachers who have passed only the middle examination and have given such men a three-years' course. This system has now been changed, and the schools are to train matriculates, the course being reduced to one of two years. It is hoped in this way to obtain a better class of teachers at smaller expense. The first-grade training schools are all well housed and succeed in turning out a sufficient supply of well-trained teachers.

Training of teachers.

The problem of providing vernacular teachers for elementary schools is more difficult, largely because the poor pay offered in such schools makes it difficult to induce persons to come forward for training. The work is now carried on in small schools, of which there are approximately two in each subdivision. These schools were originally designed for training sixteen pupils each. One teacher is allowed for the training work, and in addition each school has an upper primary practising school with three teachers. The work of these schools has not been altogether satisfactory, largely because their number renders difficult both the employment of a sufficiently well-paid staff and the necessary supervision. It is hoped to make the schools more attractive by an increase in the rate of stipends to the teachers under training, which will take effect from next year, though this increase has only been secured by reducing again to seventeen, the number of pupils at each school, which was raised to twenty in the year 1919. Even, however, if each school were to turn out seventeen pupils annually, the supply would be almost adequate if these pupils were all to take up teaching as a profession. Unfortunately this end has not yet been secured. If the teachers are to be trained in one year, they must have passed at least the middle examination before their training begins, and men with such qualifications cannot always be obtained; while, again, there is a substantial leakage in the number of trained teachers, for during the past five years the number of teachers trained has been 6,441 and the increase in the number of trained teachers in primary schools only 3,943. Again, the remedy is to offer better pay, so that

Training of teachers for elementary schools.

qualified men may be attracted and, after training, may be retained in the profession.

Education of girls.

Figures showing the progress of education among the girls in the province are somewhat similar to those for the education of boys. Thus, for primary schools for girls, there was a fall from 2,520 to 2,501 in the number of schools and from 57,477 to 57,027 in the number of girl pupils during the past five years. Five years before the total number of public girls' schools of all classes in the province was only 1,446 and that of their girl pupils 35,785. The causes for the check are the same as for boys' schools, but the increase during the first quinquennium was perhaps abnormal: specially high stipends were then offered in girls' schools, and many such schools were opened in the hope of obtaining these stipends, but collapsed when it was found that the necessary funds were not available. The number of girls in public schools for boys has dropped from 50,253 in 1911-12 to 48,459 in 1916-17 and 44,506 in 1921-22. On the other hand, the higher education of girls is making progress. Ten years ago there was no college in the province, whereas the Ravenshaw Girls' School at Cuttack, which is managed by Government, now has intermediate classes attached to it. The number of girls in the high stage has risen from 49 to 88, and in the middle stage from 135 to 389. Good work is also being done by some of the training classes of which there are now eight. Unfortunately the education of girls is even more hampered than that of boys by the want of the necessary funds, for women teachers require larger salaries than men, and schools for orthodox girls at any rate have to spend large sums of money in providing conveyances to bring their girls to school. It is owing to this disparity in the cost of the schools that middle vernacular schools for girls, and not for boys, continue to be financed directly by Government.

Schools for European children.

The education of European children in the province is carried on in nineteen schools, of which all but four are day schools maintained by the railways. Of the four boarding schools, all of which are under Mission control, two are at Cuttack, one at Bankipore, and one at Kurji, and the total number of pupils in all the schools has risen from 975 ten years ago to 1,219. Substantial improvements have been effected in the buildings of the boarding schools, and some of the railway schools have also been re-housed.

A large new school will be opened next year at Ranchi, and should be of great help to children from this province who find it difficult to obtain admission to schools in the hills. The school should also be cheaper than schools in the hills owing to the smaller expenditure on warm clothing and on travelling that will be involved.

During the ten years Government have done a great deal to encourage Oriental education. Two comparatively small Sanskrit schools at Muzaffarpur and Cuttack, respectively, have been taken under the control of Government, provided with new buildings and dignified with the name of colleges, while at Bankipore a madrasa, established by the generosity of Mr. Saiyid Nurul Huda, C.I.E., has also been taken under Government control and is being provided with greatly increased accommodation. Boards have been set up to conduct examinations in Sanskrit and in Islamic subjects and, as already mentioned, special inspecting officers are now employed to supervise work of this nature. These officers act as secretaries to the Examination Boards concerned.

Sanskrit education.

The Reformatory School at Hazaribagh continues to admit pupils from the three provinces of Bengal, Bihar and Orissa and Assam. During the ten years its buildings have been much improved and the workshop has been provided with a large oil-engine. The staff has also been thoroughly revised, so as to make the institution less like a jail and more like a real school with a technical bias. The number of pupils is now 350.

Reformatory School.

During the year 1920-21 medical officers were appointed, one for the boys' high schools in each division and one for girls' secondary schools throughout the province. These officers regularly examine the health of the students and information as to any defect is conveyed to the parents or guardians. They also inspect the sanitary arrangements of the schools and their hostels. The scheme is growing in popularity, though unfortunately it is not always possible to secure that prompt action is taken by the parents on the medical officer's advice.

Medical officers for schools.

The number of middle and primary scholarships was raised substantially during the year 1920, there being now 182 middle scholarships against 135, 245 upper primary scholarships against 142, and

Scholarships.

985 lower primary scholarships against 613. The value of scholarships of these classes has been raised from Rs. 4 to Rs. 5, from Rs. 3 to Rs. 4 and from Rs. 2 to Rs. 3, respectively, and in the case of middle scholarships the period of tenure has been extended to cover the whole of the high school stage.

Technical and industrial education.

The control of technical and industrial schools has been transferred to the Department of Industries. There are four Government schools in existence and seven Government aided schools. Of Government institutions the most important is the Bihar School of Engineering. This possesses an adequate teaching staff and is provided with well-equipped shops and plant, and is, therefore, able to give good theoretical and mechanical instruction in engineering subjects. Other important institutions are the Ranchi Industrial School and the Phulbani Industrial School. For instruction in mining the Central Government proposed to start an Imperial School of Mining and Geology at Dhanbad to provide instruction of the highest class in the various branches of mining and geological science. Unfortunately, however, it has not yet been found possible to allot funds for this purpose. Meanwhile the Local Government have established evening mining classes which are very well attended. The object of these classes is to instruct students so that they shall be able to obtain a second class manager's certificate in examinations held by the Mining Board.

Jamshedpur Technical Institute.

Besides these Government institutions there are several aided institutions which are doing very valuable work. The chief among these is the Jamshedpur Technical Institute, which was opened on the 1st of September, 1921. The object of this institute is to substitute trained local labour on blast and steel furnaces for labour which has hitherto been imported and to train a few men for higher posts. Another proposal to establish an institute at Jamalpur, to give practical and theoretical instruction in mechanical and electrical engineering has been making slow progress, but at the end of 1921-22 the proposals for its establishment had been finally sanctioned, and a start was expected to be made during the next year. Of the other aided schools the most important are those at Balasore and Beniadih; the former provides instruction in carpentry, cabinet work, fitting, and the latter gives instruction

to the sons of artisans in subjects connected with railway construction and coal-mines. The remaining institutes of which no mention has been made are artisan schools, which teach boys such things as carpentry, machine tool work, fitting, motor car repairing, blacksmithy, drawing and boot-making. Several are in the charge of missionaries who have devoted considerable time and thought to their improvement.

The Sabour Agricultural College provided six months and two years' courses in agriculture. The results of these courses were not entirely satisfactory as the students only came to the college with the intention of securing employment under Government; and following the recommendation of the committee, which was appointed to consider the whole position of the Agricultural Department, Government have now decided to close the teaching courses at the college with effect from the 15th March, 1923.

CHAPTER X.

Details of the last Census.

THE census procedure followed the same lines as in 1911 and a very brief summary only is required. The first step was the preparation of the census mauza register which is a complete list of all the villages and hamlets in existence with the number of houses, *i.e.*, commensal families, in each. The census village is the mauza as defined in the Tenancy Acts which is a parcel of land as a rule partly built over but mostly cultivated or waste land with a definite position and area. It may contain no habitation at all: on the other hand it may contain several detached groups of habitations, each group bearing a separate name. On the basis of the information so collected the districts are parcelled out into census divisions, each mauza forming one or more blocks, *i.e.*, a group of houses under an enumerator. The number of houses in each block ranged from 30 to 50, experience having shown that that was the largest number with which one man could deal efficiently between 7 A.M. and midnight. The blocks were grouped into circles under a supervisor which usually contained from 10 to 15 blocks and from 400 to 600 houses. The chaukidari union was utilized as much as possible for this purpose. The circles again were grouped into charges, each under a superintendent and each containing about 12,000 houses. The charge as a rule coincided with the police station jurisdiction and the charge superintendent was usually the sub-inspector of police. When the houses had been divided up into blocks in this manner and the staff had been appointed the actual numbering of the houses and the preparation of house lists (*i.e.*, forms showing for each block the number of the house and name of the head of the family) began, in Bihar on November the 13th and elsewhere on October the 15th. This process was timed to take one month. From that point onwards the census staff were constantly and methodically trained in the correct method of filling up the census schedules.

Procedure adopted at the Census.

The preliminary enumeration began in rural areas on February the 10th, 1921, and in towns on February the 20th. In rural areas it ended by March the 1st and in towns by March the 10th. During this period the necessary particulars were entered in the schedules for all persons ordinarily resident in each house. In order to reduce mistakes to a minimum the record was first made on plain paper and the schedules were not written up till the rough drafts had been checked and passed by the supervisor or some other superior officer. The actual census took place on the night of March 18th and consisted in checking and correcting the schedules prepared at the preliminary enumeration by striking out the entries relating to persons who had died or gone away and entering the necessary particulars for newly-born children and new-comers, so that the record corresponded with the state of things actually existing on the census night. The preparation of the provisional totals began that night or the next morning. The enumerators met their supervisors and prepared abstracts showing the number of houses and of the persons, male and female, in their blocks. The supervisor prepared a similar summary for his circle which was despatched to the charge superintendent. The latter having received and checked all the circle summaries drew up a summary for his charge. The last stage in the preparation of the provisional totals was reached when the District Census Officer, having received and checked all the charge summaries, prepared a similar summary for the district which he wired to the Provincial Superintendent and to the Census Commissioner for India. So expeditiously was this work done, that the figures for two districts, Balasore and Bhagalpur, were received on the evening of the day following the census. At the next stage the entries on the schedules were copied out on slips and the slips were then sorted for the different census tables and the results compiled. The slips were generally copied in the districts and when ready were sent to the central offices where the sorting and subsequent operations required for the preparation of the final district tables were carried out. In Palamau and Angul they were copied with great success by school boys. Finally the compilation registers in which the figures obtained by sorting were entered were despatched to the office of the Provincial Superintendent where they were examined in detail and discrepancies enquired into before the provincial tables were drawn up.

The province, inclusive of the Feudatory States, has an area of 111,809 square miles and a population of 37,961,858 persons. It is divided by nature and history into three parts, Bihar, Chota Nagpur and Orissa, which differ from each other in their inhabitants no less than in their physical features and it is convenient to follow these natural boundaries in discussing the census statistics. Bihar includes the fertile alluvial valley of the Ganges in the north and is composed of the Patna, Tirhut and Bhagalpur divisions, excluding the Santal Parganas. The population of Bihar exceeds twenty millions of persons, and it is therefore convenient to divide it further into two parts distinguishing north Bihar which lies north of the Ganges from south Bihar which lies south of the river, Bhagalpur being assigned to the former and Monghyr to the latter. The Santal Parganas naturally form a part of the central hilly part of the province which it is convenient to describe as the Chota Nagpur Plateau. This division of the province also includes the Feudatory States of Chota Nagpur and Orissa, which in physical configuration and in their inhabitants have a greater affinity to the districts of Chota Nagpur than to the third division of the province, Orissa, which consists of the strip of alluvial plain between the hills and the Bay of Bengal formed by the deltas of the Subarnarekha, Brahmini and Mahanadi rivers. This arrangement which is that followed also in connection with previous censuses is explained in the following statement which shows how the arrangement of the province by these four natural units compares with its arrangement by Commissioners' Divisions:—

The population and natural divisions of the province.

District or State.	Commissioner's Division.
I.—NORTH BIHAR.	
Saran	Tirhut.
Champaran	Do.
Muzaffarpur...	Do.
Darbhanga	Do.
Bhagalpur	Bhagalpur.
Purnea	Do.
II.—SOUTH BIHAR.	
Patna	Patna.
Gaya	Do.
Shahabad	Do.
Monghyr	Bhagalpur.
III.—ORISSA.	
Cuttack	Orissa.
Balasore	Do.
Puri	Do.

IV.—CHOTA NAGPUR PLATEAU.

District or State.	Commissioner's Division.
Hazaribagh	Chota Nagpur.
Ranchi	Do.
Palamau	Do.
Manbhum	Do.
Singhbhum	Do.
Santal Parganas	Bhagalpur.
Angul	Orissa.
Sambalpur	Do.
Orissa States	Orissa States.
Chota Nagpur States	Chota Nagpur States.

The area, population and density in the natural and administrative divisions are given in the following statements :—

NATURAL DIVISIONS.

Natural Division.	Area in square miles.	Population.	Mean density per square mile.
North Bihar	21,822	14,007,646	642
South Bihar	15,076	7,574,003	502
Orissa	8,231	3,996,833	486
Chota Nagpur Plateau ...	66,680	12,383,376	186

ADMINISTRATIVE DIVISIONS.

Administrative Division.	Area in square miles.	Population.	Mean density per square mile.
Patna Division	11,149	5,544,038	497
Tirhut Division	12,598	9,949,268	790
Bhagalpur Division	18,613	7,886,982	424
Orissa Division	13,736	4,968,873	362
Chota Nagpur Division ...	27,065	5,653,028	209
Feudatory States	28,648	3,959,669	138

The province supports a population slightly larger than the population of England and Wales on an area nearly twice as large and a population nearly as large as that of France on rather more than half the area of that country. The Orissa division which is the least populous of the administrative divisions of the province contains a population almost as large as that of Australia, while the Tirhut division which is the most populous contains a population larger than that of the whole of Canada and nearly twice as large as that of Australia.

Extent of population.

Since the first census was taken in 1872 the population of the province has increased by 34·6 per cent. The general trend of the history of the population during the last fifty years has been one of increase at a declining rate down to the year 1901 which has been converted into an actual decrease in the last decade. The increase has no doubt largely been due to the steadily improving standard of enumeration and in Bihar in particular where every available *cottah* of land is cultivated and the mean density per square mile now stands at 642 in north Bihar and 502 in south Bihar, the pressure of population on the soil is such and has been such for many years that there is little scope for increase of population. The increase in Orissa is greater and is due to the fact that during the early years of the half century that has expired since the first census Orissa was recovering from the great famine which had swept away a large part of its population in 1866. It is in Chota Nagpur, however, that the increase is really marked. For every thousand persons in 1872 in the Chota Nagpur plateau there are now rather over 1,850 persons. In other words the actual population has nearly doubled without making any allowance for the vast number of emigrants who were enumerated elsewhere. During the last ten years the Chota Nagpur plateau shows a slight increase of 0·1 per cent. while all the other three divisions show decreases which vary from 0·7 per cent. in north Bihar to 4·6 per cent. in Orissa.

Increase in population since 1872.

The outstanding incident of the last decade from the demographic point of view was the influenza epidemic. The first signs of this disease were noticed in July 1918 in a not particularly acute form. After a lull of a few weeks it

The influenza epidemic of 1918.

began to spread along the routes of communication. Before the end of the year 17·2 per mille of the population or over half a million persons had perished of the disease in the British districts alone. The districts which suffered most were Gaya, Shahabad, Palamau, Ranchi and Hazaribagh. Those which suffered least were the coastal districts of Orissa, Purnea and the Santal Parganas. Bihar and Orissa lay between the province which suffered most—the Central Provinces, and that which suffered least—Bengal, and in comparison with other provinces it escaped relatively lightly; nevertheless no other epidemic has left so deep a scar in recent years on the population of the province. While this epidemic was raging other trouble was brewing. No rain fell in 1918 after the middle of September with the result that the crops were universally poor and the outturn of winter rice was only 60 per cent. of the normal. The price of food-grains rose and in 1919 the distress was acute and general. Famine occurred in parts of Angul, Bhagalpur and the Santal Parganas but the number of persons on famine relief was never great. On the other hand charitable relief was given in a great many cases and emigration largely increased. The combination of the influenza epidemic and this severe and universal scarcity is the principal reason of the decrease in the population during the last ten years.

Scarcity in 1918—1919.

In north Bihar, Saran shows an increase of population of 50,523 due in part to the reduced intensity of the plague epidemic but principally to the fact that emigration has fallen off. Champaran also shows a slight increase. In these districts the cultivation is less intense than in the other districts of Tirhut and there is still room for increase of population; in many parts the cultivators are in possession of more land than they can properly cultivate and the revisional settlement in Saran has shown that in the last twenty-five years there has actually been a reduction in the cultivated area. In Muzaffarpur and Darbhanga on the other hand there has been a heavy decrease of population more marked in the south of the districts and less so in the north. In Muzaffarpur the loss of population amounts to 3·2 per cent. and in Darbhanga to 0·6 per cent. which is in each case the exact percentage of the increase that occurred between 1901 and 1911. The centre of population

North Bihar.

in these two districts has been gradually shifting to the north for many years past. The explanation of this phenomenon seems to be that the south of these districts, which lies within the area in which plague is endemic, is less healthy than the north; rents also are higher in the south than in the north while the cultivation of rice which predominates in the north is more remunerative and capable of supporting a denser population. Bhagalpur is also a heavy loser with a 4·9 per cent. decrease. The loss is heaviest in the south of the district where there had been famine in 1919 and from which a large number of people had emigrated just before the census. In Purnea the pressure of population is only 495 persons to the square mile. There is still ample room for increase of cultivation and the population in the areas reclaimed from the Kosi river in the Sadr subdivision shows a marked increase.

South Bihar.

In south Bihar the decrease of population amounts to 2·5 per cent. Monghyr has lost most heavily and then, Shahabad. The population of Gaya is almost stationary. In this division the loss of female population is marked. In the case of Patna the loss of population is partly accounted for by the fact that there were no coolies cutting the crops in the Mokameh Tal as there had been ten years ago. Shahabad suffered specially badly from the influenza epidemic. In Monghyr the south of the district suffered acutely from scarcity in 1919 and the people emigrated wholesale: there has also been a striking reduction of population of Begusarai subdivision to the north of the river where it seems likely that the same forces are at work as in the southern portions of Muzaffarpur and Darbhanga districts.

Orissa.

In Orissa each district shows a decline of population. Here the influenza epidemic was less severe than elsewhere but the agricultural distress was more acute. The decrease in Cuttack is confined to the male sex and is explained altogether by the increase of emigration due to unfavourable conditions. In Balasore on the other hand, where the loss is greatest, it is due less to emigration than to the prevalence of a particularly severe form of fever in the Sadr subdivision.

In the Chota Nagpur Plateau, Singhbhum shows a marked increase of population by 65,044 persons or 9·4 per cent. which is the biggest increase recorded in any district in the province. This is due primarily to the rapid growth of Jamshedpur and the development of the mineral resources of the district. The increase of 6·6 per cent. in Palamau is due to the fact that the pressure of population in this district is light. The increase in Sambalpur of 6·1 per cent. is due to reduced emigration. Both groups of states show inconsiderable increases, but all the other districts, except Manbhum, which is stationary, show decreases.

Chota Nagpur.

The mean density per square mile in the province has fallen from 344 to 340, the decrease having occurred in all the four natural divisions except the Chota Nagpur plateau. The density in the Tirhut division rises to 790 to the square mile and in Muzaffarpur, which is the most densely populated district, to 907. In south Bihar the density is greatest in Patna district where it is 763 persons to the square mile. In Cuttack it rises to 565 persons to the square mile which is higher than elsewhere in Orissa. In Chota Nagpur the density is greatest in Manbhum where it rises to 373. In the more densely populated areas of Bihar and in the central fertile strip of Orissa the density of the rural population rises in parts to 1,000 to the spuare mile.

Density of population.

The province is almost entirely rural in character. Nine hundred and sixty-three persons in every 1,000 live in villages, although "towns" for census purposes include not only all municipalities and cantonments but all other continuous collections of houses which are of a distinctively urban character. In the province there are eighty-one such towns of which four, Patna, Gaya, Bhagalpur and Jamshedpur, have been treated as cities. The urban population shows very little sign of increasing. In the last thirty years it has increased only from 345 to 371 per mille and this increase is chiefly a matter of classification. In the seventy-three places which were treated as towns at the last two censuses the increase in population in the last ten years (43,583) is more than accounted for by the increase in one of them,

Population predominantly agricultural.

viz., Jamshedpur. The urban element is most important in south Bihar, the urban proportion of the population of the Patna division (78 per mille) being rather more than twice the provincial average (37 per mille). After south Bihar comes Orissa with 38 per mille living in towns, though there are only two large towns, Cuttack and Puri. In north Bihar the villages are larger in size than elsewhere in the province but the towns are few and most of them have lost population in the last decade. In the Chota Nagpur plateau the urban element (27 per mille) is of the same proportion as in north Bihar but the towns are more numerous and smaller.

Small urban element in population.

The table below gives the population of the four cities at the last six censuses. In the case of Patna the apparent increase between 1872 and 1881 was caused by defective enumeration at the first census and that between 1901 and 1911 by the epidemic of plague that emptied the town in 1901. But for these apparent irregularities the decline since 1872 has been steady. On the present occasion the decrease amounts to 16,177 or 11·9 per cent. and would have been heavier but for the creation of the new capital. Loss of trade seems to be at the bottom of this decline but there has also been a loss of population from natural causes during the last ten years, the vital statistics showing a net decrease of 9,000. The marked increase in Gaya in the last decade is due to the fact that plague emptied the town in 1911: as compared with the census taken in June 1911 after the population had returned to their homes the present census shows a slight decline. Bhagalpur shows a loss of 5,471. This town is not an industrial centre, its chief industry, silk weaving, being a cottage industry, and like the other parts of the district it has suffered loss of population in the distress and epidemics of the last few years. The increase of Jamshedpur is a remarkable

Cities.	Population.					
	1921.	1911.	1901.	1891.	1881.	1872.
Patna ...	119,976	136,153	134,785	165,192	170,654	158,900
Gaya ...	67,562	49,921	71,288	80,383	76,415	66,843
Bhagalpur ...	68,878	74,349	75,760	69,106	68,238	65,377
Jamshedpur ...	57,360	5,672	...	...	...	...

Variations in the city population.

phenomenon. Land was first acquired for the Tata Iron and Steel Company's works in 1907. The first stake was driven in 1908, the foundations were laid in 1909, and the first iron was produced a few months after the last census. Since then the development of the town has been rapid and a number of subsidiary industries are developing there to utilize products of the mill. More land has recently been acquired and the subsidiary companies are located in this area as tenants of the Tata Iron and Steel Company. The population has increased ten-fold in the last ten years and would have been larger but for an epidemic of cholera just before this census which caused an exodus.

Jamshedpur's rapid growth.

The villages are largest in north Bihar, where a quarter of the population live in villages with a population of 2,000 or more, and smallest in the Chota Nagpur plateau where 649 persons out of every thousand live in villages with a population of less than 500. But the size and area of the census village, *i.e.*, of the *mauza* is no indication of the size of the groups of houses which constitute the residential villages. The *mauza* is a parcel of ground with fixed boundaries which by no means necessarily contains a single group of houses. Particularly in parts of Bihar the boundaries of the *mauza* owing to historical causes follow those of the estate and thus it occurs that for instance in Monghyr there is one village of over 72,000 acres and another of less than one acre.

Size and population of villages.

The three religions numerically least important are proportionately the most numerous in towns, the Parsis with 688 per mille, the Sikhs with 578 per mille and the Jains with 288 per mille living in urban areas. Amongst the four main religions the Muhammadans are most addicted to town life: out of every 1,000 Muhammadans, 80 live in towns which is more than double the Hindu proportion of 34 per mille. In the population of the province as a whole there is 1 Muhammadan to every 8½ Hindus but in the towns there is 1 Muhammadan to about 4 Hindus. The proportion of Muhammadans living in towns is actually greatest in Orissa but the Muhammadan population of Orissa is numerically unimportant. In south Bihar nearly a quarter of the urban population is Muhammadan. Out of the Christians 79 out of every 1,000 live

Religions in towns.

in towns, the proportion varying inversely with the number of Christians in the district: where the number of Christians is small, they are mostly strangers and strangers are usually found in the towns.

Proportion of females to males in towns.

The proportion of females to males in the total population of the province is 1,029 per mille; in towns it is 878 per mille and in Jamshedpur it sinks to 621 per mille. This is accounted for by the fact that more immigrants are found in towns than in the villages and immigrants are usually males who often leave their women folk behind them.

Immigration and Emigration.

No less than 98·9 per cent. of the people enumerated in the province were born in the province and no less than 95·7 per cent. were born in the district or state in which they were enumerated. The number of immigrants into the province from other parts of India amounted to 387,000 and 35,000 persons mostly from Nepal had come into the province from outside India. In exchange for these 422,000 persons received, the province had sent out 1,917,000 emigrants almost entirely to non-contiguous parts of other provinces of India; in other words it had lost over four persons for every person it had gained by migration. But this loss is not a permanent one. Most of the emigrants are cultivators or labourers who emigrate between the harvests. The slack time in the agricultural year begins when the winter rice crop has been cut and ends in some places with the harvesting of the spring crops or more generally with the bursting of the monsoon. This, therefore, is the time of maximum emigration. In February the province is at its emptiest: by March, when the census is taken, the labourers are beginning to return to their homes. The census returns, therefore, show nearly but not quite the full range of the normal tide of emigration.

In three districts, Purnea, Manbhum and Singhbhum the immigrants number 10 per cent. of the actual population. In Purnea it is the vacant spaces and light incidence of rent that draw: in Singhbhum and Manbhum it is industry. The most cosmopolitan population was found in Singhbhum, where natives of nine Asiatic and eleven European countries were enumerated, as well as natives of America and Australia.

The following statement shows for each district in the province the actual number and proportion per mille of the emigrants, *i.e.*, persons born in the district but enumerated outside :—

District.	Number of emigrants.	Per mille of actual population.
NORTH BIHAR.		
Saran	209,890	89·69
Champaran	46,462	23·93
Muzaffarpur	162,715	59·06
Darbhanga	126,810	43·52
Bhagalpur	171,651	84·40
Purnea	27,824	13·74
SOUTH BIHAR.		
Patna	132,914	84·43
Gaya	189,969	88·23
Shahabad	148,353	81·65
Monghyr	223,544	110·12
ORISSA.		
Cuttack	255,821	123·90
Balasore	83,277	84·93
Puri	56,587	59·46
CHOTA NAGPUR PLATEAU.		
Hazaribagh	147,535	115·53
Ranchi	348,172	260·91
Palamau	35,803	48·81
Manbhum	117,673	75·97
Singhbhum	100,849	132·78
Santal Parganas	297,913	165·63

District.	Number of emigrants.	Per mille of actual population.
CHOTA NAGPUR PLATEAU—*concld.*		
Angul	25,489	139·61
Sambalpur	92,015	116·55
Orissa States	106,729	28·03
Chota Nagpur States...	2,449	16·06

385,000 persons from north Bihar were enumerated outside the province as compared with 95,000 persons enumerated in other parts of the province. Of these 275,000 persons, 137,000 of whom came from Saran and 82,000 of whom came from Muzaffarpur, were enumerated in non-contiguous parts of other provinces. In south Bihar the number of emigrants is even greater in proportion. 214,000 persons born in south Bihar were enumerated in other parts of the province and 363,000 persons were enumerated outside the province. All four districts of south Bihar send out many thousands of emigrants to other provinces, particularly to Bengal, and the average number of emigrants is greater in these districts than in the case of north Bihar. In Orissa the most important source of emigration is Cuttack which had sent out 191,000 emigrants to non-contiguous parts of other provinces. In the Chota Nagpur plateau Manbhum had sent out 97,000 emigrants to other provinces, 72,000 to non-contiguous parts, mostly to Assam; the Santal Parganas had sent out 242,000 emigrants mostly to the Barind in Bengal and to Assam; while Ranchi had sent out 301,000 emigrants to other provinces, mostly to the tea gardens in the Duars and Assam. The total emigrants from Ranchi district represent more than a quarter of the actual population of the district. The great majority of these emigrants as already stated go temporarily from Bihar and Orissa between the harvests. The emigrants to the tea gardens who are encouraged to take their families with them stay away longer and some of them settle permanently, and the Santal emigrants to Bengal and Assam frequently go to make new permanent homes for themselves as is shown by the fact that while the number of Santals

The economic effect of the emigration to the gardens.

in these districts is increasing the number of persons born in the Santal Parganas is decreasing. The importance of this migration from an economic point of view is very great. The total amount of money remitted to the province by money order during the last few years, which gives a rough idea of the remittances made to their homes by the emigrants, quite apart from any sums which they may bring with them, has risen steadily from Rs. 421 lakhs in 1915 to Rs. 666 lakhs in 1920.

Religion.	Population.		Variation per cent. 1911—1921.	Percentage of population 1921.
	1921.	1911.		
Hindu	31,599,625	31,749,018	—0·5	83·24
Muhammadan	3,706,277	3,683,438	+0·6	9·76
Christian	303,358	268,265	+13·1	·80
Animist	2,337,943	2,720,238	—14·1	6·16
Others	14,655	14,284	+2·6	·04

Religions.

Of the total population of the province 31,599,625 or 83·2 per cent. are Hindus, 3,706,277 or 9·8 per cent. are Muhammadans, 2,337,943 or 6·2 per cent. are Animists and 303,358 or 0·8 per cent. are Christians, the balance being accounted for by various minor religions. The Hindus are in a majority in every district in the province except in Ranchi where they number 42 per cent. and in the Santal Parganas where they number 46 per cent. of the population. The proportion of Hindus is highest in Orissa where it reaches 96·8 per cent. and exceeds 95 per cent. in each of the three coastal districts. In south Bihar the number is just over 90 per cent. In north Bihar the proportion (83 per cent.) is somewhat reduced by the large population of Muhammadans in Purnea and in the Chota Nagpur plateau (75 per cent.) by the large number of Animists. In the Chota Nagpur plateau there has been a considerable defection from Animism to Hinduism except in Palamau and the Santal Parganas, but this transference of numbers must be

The preponderance of Hindus.

regarded as a matter of classification and does not represent any specially marked movement towards Hinduism. If the religious tendencies that have manifested themselves in the Chota Nagpur plateau during the last few years be examined, the general impression is that so far from there having been a widespread movement towards Hinduism, the movement, so far as there has been any general movement at all, has been away from Hinduism, there being an apparent tendency to reform and maintain the tribal religions.

Muhammadans.

The Muhammadan population is greatest, both absolutely and proportionately in the north-east corner of the province: in Purnea there are 814,402 Muhammadans who represent 40 per cent. of the district population and nearly a quarter of the Muhammadans in the province. The further south one proceeds the lower does the Muhammadan proportion become till in Orissa it amounts only to 3 per cent. Whereas, however, the Hindus have decreased by 0·5 per cent. in the last ten years the Muhammadans have slightly increased by 0·6 per cent. The increase is due to a small extent to conversions, but more to the fact that a higher proportion of Muhammadan married women appear to survive the risks of childbirth, the proportion of married Muhammadan women living in the later years of the reproductive period being greater than the proportion of married Hindu women.

Animists.

Of the Animists, *i.e.*, persons who described their religion as that of their tribe, 98·1 per cent. are found in the Chota Nagpur plateau. Elsewhere they are numerically unimportant. The decreases in numbers are most marked in Manbhum, Ranchi and Singhbhum in which districts the Santals have now been classified wholesale as Hindus, while the Oraons in Ranchi have also been transferred from Animist to Hindu in considerable numbers. In the states the fluctuations are extreme but they do not represent any material change in the outlook and practices of the population.

Christians.

The Christians in the province number 303,358 of whom 292,921 are Indian Christians. Of these 284,043 were enumerated in the Chota Nagpur plateau and 197,216 in Ranchi district. Next to Ranchi, but at a long interval come the Orissa Feudatory States where 46,084

Christians were enumerated, while over 10,000 were found in Singhbhum and the Santal Parganas. In the province there has been an increase of 35,093 or 13·1 per cent. on the number of Christians recorded in 1911 : an increase of over 20,000 has occurred in the Ranchi district alone. The statement in the margin shows the principal denominations. Nearly half the Christians in the province are Roman Catholics and of that half nearly three-fourths were found in Ranchi district. Nearly three-quarters of the Lutherans also were found in Ranchi, but Gangpur State, the Santal Parganas and Singhbhum are also centres of this church. The Anglicans number 35,119. The members of this church are to be found in every district but more than half of them are found in Ranchi. Amongst the other religions the most numerous are the Jains (4,610), that being the religion of the Marwari community, and the Aryas (4,578), nearly all of whom were found in the Dinapore subdivision of Patna district.

Roman Catholics	147,074
Lutherans	96,097
Anglicans	35,119
Baptists	15,710

Individual age returns are notoriously untrustworthy but taken in the mass and as compared with similar returns made at previous censuses there is no reason to doubt their general outlines. During the last ten years the age constitution of the population of the province has been much affected by the influenza epidemic and the scarcity of 1918-19. The extreme and exposed age-periods, *i.e.*, " 0 to 10 " and " 60 and over " have both decreased in proportion to the total population by 5·5 per cent. The proportion of persons aged 15—40 has also slightly decreased by 0·8 per cent. while the age-periods 10—15 and 40—60 have increased respectively by 4·9 and 2·8 per cent. The result of the vicissitudes of recent years has therefore been that there has been a marked reduction at both ends and a slight reduction in the middle, while increases have occurred in youth and advanced middle-age. It would appear that the reduced proportions at the extreme age-periods which are most marked in Orissa are due rather to the agricultural scarcity and the reduced proportion at the middle age-period to the influenza, which appears to have been specially deadly to persons of middle-age : it is the middle age-periods also which are affected by emigration. The mean age of the provincial population in the case of females

Age.

is exactly what it was ten years ago: in the case of males it has slightly increased owing to the reduction in the number of male infants.

Civil Condition.

About half the population of the province is married and of the remaining half three-quarters are unmarried and the rest widowed. As compared with ten years ago the proportions of unmarried and widowed of the population have increased and the proportion of married persons has decreased as shown in the statement in the margin. The relative increase of the unmarried in the earliest age-periods must be due partly to the decreases in the proportions of married but it is due more to a growing tendency to postpone the age of marriage; a striking reduction is noticeable in comparison with 1911 in the proportion of married children at the age-periods 0—5 and 5—10, as shown in the statement below.

INCREASE OR DECREASE PER CENT., 1911—1921.

UNMARRIED.		MARRIED.		WIDOWED.	
Males.	Females.	Males.	Females.	Males.	Females.
+1·7	+1·6	−4·1	−5·2	+14·3	+1·2

	0—5.		5—10.	
	Males.	Females.	Males.	Females.
1921	10	18	82	146
1911	17	32	110	194

Proportions of married persons among the various classes.

The proportion of married persons, both male and female, 494 per mille and 495 per mille, respectively, is higher amongst Hindus than amongst the followers of any other of the main religions. The Aryas with 526 per thousand married males and 503 per thousand married females come even higher than the Hindus and, strange to say, in

spite of the fact that they preach the abolition of child marriage, they have a higher proportion (31 per mille) of married persons of both sexes at the age of 0—5 than the Hindus (16 per mille). After the Hindus the Muhammadans have the highest proportion of married, they being followed in turn by the Animists and the Christians, the relative positions of the different religions being determined by the number of married persons at the earlier age-periods. Marriage is more universal in the north of the province than in the south, this again being determined by the prevalence of child marriage. In Darbhanga, where this practice is more prevalent than in any other part of India, 282 out of every 1,000 persons aged 0—10 are married: in this district there are 9,541 married males, 15,965 married females, 326 widowed males and 647 widowed females who have not yet reached the age of 5. Infant marriage is also prevalent but to a less extent in the adjoining districts of Muzaffarpur, Bhagalpur and Monghyr. The widowed state is most common in the Orissa division and, as between one religion and another, amongst Hindus, who impose various restrictions on the remarriage of widowed females.

Proportion of females to males.

There has always been an excess of females in the population of this province. In 1872 the number of females per thousand males was 1,009; from that date there was a progressive increase in the proportion of females till 1901 when the figure of 1,047 was reached; in 1911 the figure fell to 1,043 and at the present census to 1,029. The drop in the female population of the province is the outstanding feature of the last decade, the loss of females (368,051) amounting to more than three times the loss of males (104,844). The principal reason for this appears to be the fact that influenza proved more deadly to the female than to the male sex. Although the actual recorded deaths from fever in that year do not prove this, the proportion of females to males who died in that year from all causes was much higher than usual and the similar experience of other provinces, where statistics directly proved the connexion leaves little doubt that the cause for this was the influenza. More males are born than females but owing to the heavy infant mortality amongst males, male infants being more delicate than female infants, the females

Influenza more deadly to females.

predominate amongst infants in the first year of life. The proportions of the sexes in the natural population of the province are much disguised by the wholesale emigration that takes place, the emigrants being predominantly males. In the actual population males are in excess in five districts only but in the natural population, *i.e.*, the population born in the district wherever enumerated males are in excess in eleven districts. The proportion of the sexes in the four main religions is shown in the margin.

	Number of females per 1,000 males.
Hindus	... 1,027
Muhammadans ...	... 1,046
Animists	... 1,032
Christians	... 1,004

Extent of literacy.

The number of persons who are literate, *i.e.*, who can write a letter to a friend and read the reply, is 1,701,489 which is 45 per 1,000 of the population. Of these the vast majority (1,591,754) are males, there being between 14 and 15 literate males to every literate female. The most literate part of the province is Orissa where 160 males and 9 females in every 1,000 are literate. In South Bihar, which occupies the second place, the proportion of literate females is the same but the male proportion is only 122. Elsewhere the standard is much lower: in North Bihar the male proportion is 86 and the female proportion only 5 per 1,000: in Chota Nagpur the male proportion is six or one better than North Bihar. Among the districts, Patna, where 174 males and 16 females in every thousand are literate, leads in regard to both sexes. Among the religions the Christians come first including as they do a considerable proportion of Europeans and Anglo-Indians who are practically without any exception literate after passing the age of infancy. Amongst the Hindus in the province 101 males and 6 females in every 1,000 are literate and amongst the Muhammadans 99 males and 8 females: amongst males the Muhammadan is higher than the Hindu proportion in every district except four. This is largely owing to the fact that a higher proportion of the Muhammadan community is found living in towns. As compared with 1911 there has been a general advance in the standard of literacy, which is common to both sexes and all the main religions. In spite of the decrease of population, 191,939 more persons were recorded as literate in the province than were so recorded ten years ago. In 1911 out of every 1,000 males aged 5 and more 88 and

The effect of religion on literacy.

out of every 1,000 females not 5 could read and write: now out of every 1,000 males 96 and out of every 1,000 females 6 can do so. The number of persons literate in English has increased by 69 per cent. to 138,099 since 1911.

The language recorded at the census is the language which a person ordinarily speaks in his own home. In three of the Natural Divisions, North and South Bihar and Orissa there is only one language that counts. In North Bihar 98·7 per cent. and in South Bihar 99·6 per cent. of the population speak Hindi or Urdu, while in Orissa 95·8 per cent. of the population speak Oriya. In the Chota Nagpur plateau three-quarters of the population speak either Hindi, Oriya or Bengali and the remaining quarter speak a great variety of languages, mostly Munda or Dravidian. 25,222,729 persons in all speak Hindi, 7,750,646 persons speak Oriya and 1,656,990 persons speak Bengali. The Hindi speakers are most numerous in Bihar and in Hazaribagh, the Oriya speakers in the five districts of the Orissa division, in Singhbhum and the Orissa States, and the Bengali speakers in Manbhum, Singhbhum, the Santal Parganas and Purnea which are on the boundary of Bengal. Amongst the Munda languages Santali is the most common being spoken by 1,390,379 persons of whom rather more than half are found in the Santal Parganas while Manbhum and the Orissa States each contain over 200,000 persons speaking this language. Mundari is spoken by 433,534 persons nearly all of whom are in Ranchi district. Ho is spoken by 445,055 persons mostly in Singhbhum and the States, and Kharia and Bhumij are also spoken by over 100,000 persons: two-thirds of the former are found in Ranchi district. The Bhumij language is spoken most in the Orissa States and in Singhbhum: in Manbhum it has merged into Bengali. Of the Dravidian languages the most important is Oraon which is spoken by 541,059 persons. Over half of these are found in Ranchi and they are also numerous in the Orissa States, Palamau and Sambalpur where the language is commonly called Kora. Malto or the language of the Paharias of the Rajmahal hills in the Santal Parganas is still spoken by over 60,000 persons, and Kandhi or Kui by over 112,000 persons in the Khondmals and their neighbourhood.

The chief languages spoken.

Four infirmities were recorded in the census, *viz.*, insanity, deaf-mutism, blindness in both eyes, and leprosy. The statement

(PER 100,000).

Infirmity.	1921.		1911.		1901.		1891.		1881.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Insane	14	7	16	8	17	9	20	10	29	16
Deafmute	66	40	90	55	95	56	139	78	192	109
Blind	82	82	111	104	112	104	122	123	160	184
Lepers	48	17	71	23	76	24	82	26	103	29

shows the proportion of males and females so afflicted per 100,000 of each sex at this and the preceding censuses. From the first there has been a continuous decrease in the number of afflicted persons recorded in this province, the proportions now standing at about half the figures at which they stood in 1881. On the present occasion the decrease has been very marked, and it is principally due to two causes. The period of distress and scarcity that occurred in 1918 and 1919 must have made it very difficult for many of the afflicted persons to survive: if they did not perish themselves their supporters in many cases did so and at the same time the purse strings of charity must have been tightened. In the second place statistics of physical infirmities obtained through the general census of the population are never reliable and on this occasion, in view of the difficulties that occurred in taking the census at all, they are less so than usual.

Incidence of various infirmities.

The incidence of insanity in this province has never been high. It is worst in Orissa where 22 males out of every 100,000 are so afflicted. Puri shares with Patna and Ranchi, where there are mental hospitals, the highest proportion of insane in the province. The ages at which insanity occurs most frequently are from 20 to 40, the nucleus being at the age-period 30—35. Deaf-mutism is specially common in the Tirhut division where there are four times more persons so afflicted than in any other of the Commissioners' divisions. In the Tirhut districts moreover the affliction is localized: in Champaran persons so afflicted were recorded in the greatest numbers near Bettiah and Motihari towns and in Muzaffarpur near Muzaffarpur

Insanity.

town. In Saran more than half of the deaf-mutes in the district were recorded in Gopalganj, Mirganj and Siwan thanas. The proportional distribution is highest between the ages of 10 and 25, deaf-mutism being commonly associated with cretinism and cretins being usually short-lived. Blindness is most common in Bihar where the dry climate and the dusty soil are particularly deleterious to the eyes. In Shahabad 165 persons in every 100,000 are so afflicted. In Orissa the dampness of the climate and in Chota Nagpur the hills and forests prevent the clouds of dust which are responsible for so many cases of injury to the eyes in Bihar. Blindness is an infirmity which increases with age and from the age of 55 to 60 it increases very rapidly. Leprosy is very local in its distribution. In Orissa it is worst and fairly evenly distributed, 129 in every 100,000 males and 35 in every 100,000 females being so recorded. In Manbhum also over 100 out of every 100,000 males were recorded as lepers but the proportion is also high in the Santal Parganas (87 per 100,000) which adjoins the badly affected districts of Manbhum, Burdwan and Birbhum, and in Gaya (71) which is a pilgrim centre. In the eight leper asylums in British districts nearly 1,300 lepers were confined. In the case of females the maximum proportion of lepers is reached in the age-period 40—45 but in the case of males it is not reached till ten years later in the age-period of 50—55.

Deaf-mutism.

Leprosy.

The occupations of the population were classified according to a scheme of occupations which followed that adopted in 1911 with slight alterations. Of the total population of 38,000,000 over 30,000,000 are engaged in cultivation, over 24,000,000 being ordinary cultivators. The distribution of the population according to the twelve principal orders with proportions is given in the statement below.

Occupation of the population.

DISTRIBUTION OF THE POPULATION BY OCCUPATION.

Occupations.	Persons supported.	Number per mille of total population.
I.—Exploitation of animals and vegetation ...	30,900,104	814
II.—Exploitation of minerals	204,043	5

DISTRIBUTION OF THE POPULATION BY OCCUPATION—*concld.*

Occupations.	Persons supported.	Number per mille of total population.
III.—Industry	2,518,859	66
IV.—Transport	284,144	8
V.—Trade	1,449,815	38
VI.—Public force	108,893	3
VII.—Public administration	94,124	3
VIII.—Professions and liberal arts	329,358	9
IX.—Persons living on their income	8,639	0·2
X.—Domestic service	574,072	15
XI.—Insufficiently described occupations ...	1,319,947	35
XII.—Unproductive	169,860	4

As compared with 1901 there has been an increase under the head of agriculture with corresponding decreases under other heads.

Industrial census.

In connection with the present census a kind of subsidiary census was taken of all organized industries in the province, *i.e.*, of all industrial establishments containing ten or more persons employed on separate remuneration in the making, repairing, ornamenting, finishing or otherwise adapting for use, transport or sale of any article or part of an article. This industrial census was taken in greater detail than was the case in 1911. The result was to show that there were in the province 1,086 establishments employing altogether 219,974 persons, of sizes varying from the Tata Iron and Steel Works at Jamshedpur employing over 25,000 persons downwards. The most numerous kind of establishment is coal mines of which there are 380 employing over 100,000 persons. Most of these are in Manbhum but Hazaribagh is becoming a coal-mining centre of increasing importance. Mica mines are also important in this province; of these there are 92 employing 13,000 persons of which the great majority are in Hazaribagh. 52 establishments were classified as metal industries of which only the Tata Iron and Steel Works are

of any appreciable size. Under the head "Machinery and Engineering Workshops" there are 39 establishments employing 8,000 persons. None of them are of any particular size. Lac factories of which there are 111 employing 4,300 persons are most numerous in Manbhum (53) and Gaya (26). There are also 41 sugar factories employing 5,000 persons all of which with one exception are in Bihar. The cigarette factory at Monghyr employs 1,600 persons. After the Tata Iron and Steel Works the largest establishment in the province is the railway workshop of the East Indian Railway Company at Jamalpur which employs 11,500 persons. There are 36 printing presses but none of them are of any size: they are found in twelve districts and three of the Orissa States. Indigo plantations show a great falling off since the last census in continuation of the decline in the preceding decade. During the war this industry revived temporarily owing to the demand for indigo for khaki dye but its decline dates from the introduction into the market of the synthetic chemical dye and many of the factories have now been given over to the growing of country crops.

TABLE I.—Area, Houses and Population.

District or State.	Area in Square Miles.	Towns.	Villages.	Occupied Houses. Total.	Towns.	In Villages.	Population. Persons. Total.	Urban.	Rural.	Males. Total.	Urban.	Rural.	Females. Total.	Urban.	Rural.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BIHAR AND ORISSA	111,509	81	104,939	7,490,954	324,275	7,176,650	37,901,588	1,410,070	36,491,518	18,710,052	750,923	17,959,129	19,191,506	659,147	18,529,619
(1) *British Territory*	83,161	75	81,813	6,670,766	305,220	6,365,336	34,069,189	1,374,768	32,627,421	16,763,806	732,316	16,030,515	17,325,383	642,452	16,596,931
PATNA DIVISION	21,169	20	22,054	1,069,815	100,350	969,465	6,544,038	433,966	6,110,072	3,277,277	233,549	3,043,728	3,266,761	200,417	3,066,344
Patna	2,063	6	1,739	260,902	61,347	197,555	1,574,287	214,404	1,359,883	807,791	116,206	691,585	766,496	101,198	665,298
Gaya	4,712	4	8,021	414,221	28,651	385,570	2,256,920	113,005	2,043,915	1,091,063	63,676	1,027,387	1,165,857	49,329	1,116,528
Shahabad	4,373	4	6,794	393,795	10,352	383,443	2,713,831	106,557	2,607,274	1,378,423	53,667	1,324,756	1,335,408	52,890	1,282,518
TIRHUT DIVISION	12,598	24	12,160	1,229,738	60,272	1,169,466	6,949,765	269,274	6,680,491	3,544,243	136,886	3,407,357	3,405,522	132,388	3,273,134
Saran	2,683	3	4,347	442,116	18,426	423,690	2,339,253	62,495	2,277,758	1,193,253	32,163	1,161,090	1,146,000	30,263	1,115,737
Champaran	3,531	3	2,644	254,217	7,158	247,059	1,940,241	39,123	1,901,118	993,672	20,470	973,202	946,569	18,688	927,881
Muzaffarpur	3,035	6	4,048	535,232	30,123	479,109	2,754,945	67,755	2,687,190	1,354,991	33,994	1,320,997	1,399,954	33,761	1,366,193
Darbhanga	3,349	5	1,121	197,973	30,203	167,770	2,913,329	99,899	2,813,430	1,626,719	47,259	1,579,460	1,452,819	46,736	1,406,083
BHAGALPUR DIVISION	12,813	17	20,250	1,272,026	57,159	1,217,867	7,846,923	270,211	7,576,712	3,929,126	136,556	3,792,570	3,917,797	133,655	3,784,142
Monghyr	3,727	6	3,781	462,049	23,631	378,418	2,029,965	113,843	1,917,122	1,023,530	56,964	966,566	1,006,435	56,867	950,568
Bhagalpur	4,227	3	3,572	349,780	15,451	333,329	2,023,776	74,321	1,949,479	1,042,284	43,180	974,154	1,019,286	36,141	983,145
Purnea	4,708	4	4,177	321,173	8,217	273,511	2,021,696	41,807	1,962,671	1,063,183	24,544	1,018,787	981,275	15,201	966,074
Santal Parganas	5,483	3	10,120	249,027	9,953	231,471	1,792,036	43,136	1,748,501	820,379	22,008	797,971	892,789	29,136	863,653
ORISSA DIVISION	12,736	9	12,625	1,073,170	40,069	1,033,041	4,048,873	214,449	3,834,424	2,855,793	241,928	2,613,865	2,619,080	53,991	2,565,089
Cuttack	3,854	3	3,679	442,958	15,541	430,700	2,064,078	76,626	1,987,452	993,543	39,541	953,998	1,112,183	37,085	1,075,098
Balasore	3,943	3	3,445	290,715	6,337	287,478	966,896	28,215	943,256	466,122	12,118	453,976	516,286	17,256	499,030
Angul	1,841	...	1,253	41,292	...	41,292	182,574	...	182,574	91,096	...	91,096	90,954	...	90,954
Puri	3,198	3	3,040	297,211	6,191	290,220	834,851	89,608	812,467	425,548	31,269	394,279	426,108	15,650	379,319
Sambalpur	2,911	3	1,207	178,994	9,041	172,173	780,564	89,807	690,829	369,485	13,300	373,497	564,271	15,999	548,272
CHOTA NAGPUR DIVISION	27,065	15	20,245	1,156,205	49,299	1,056,613	6,653,626	236,763	6,416,763	3,423,291	250,127	3,209,370	3,232,601	196,200	3,237,405
Manbhum	7,321	3	6,158	261,163	9,787	252,756	1,276,956	44,149	1,232,797	638,021	25,230	607,448	638,935	18,957	625,978
Ranchi	7,102	3	3,171	276,240	9,627	266,911	1,334,673	51,815	1,282,858	657,291	26,797	631,494	677,382	25,018	652,364
Palamau	4,932	3	2,110	128,646	2,957	124,722	722,384	19,449	712,935	364,771	10,135	354,636	366,623	9,314	357,309
Manbhum	4,147	3	4,801	230,177	9,774	220,403	1,548,777	85,354	1,503,413	779,405	23,866	773,103	769,372	20,577	748,795
Singbhum	3,563	3	3,015	150,065	13,454	131,550	770,836	76,451	694,385	383,803	66,473	321,330	379,289	30,934	348,355
(2) *Feudatory States*	28,348	6	19,475	820,189	6,205	813,984	3,832,399	39,302	3,793,097	1,946,246	17,607	1,928,639	1,885,153	17,740	1,867,413
Orissa States	26,096	6	19,345	791,317	6,205	785,112	3,697,179	36,286	3,660,893	1,877,467	17,196	1,860,271	1,819,712	17,740	1,801,972
Chota Nagpur States	62	...	182	28,872	...	28,872	135,220	...	135,220	68,779	...	68,779	65,441	...	65,441

TABLE II.—Variation in Population since 1872.

District or State.	Persons. 1921.	1911.	1901.	1891.	1881.	1872.	Variation. Increase (+) or Decrease (−). 1911-1921.	1901-1911.	1891-1901.	1881-1891.	1872-1881.	Net Variation in Person 1872-1921. Increase (+) or Decrease (−).
1	2	3	4	5	6	7	8	9	10	11	12	13
BIHAR AND ORISSA	37,901,588	36,454,752	36,127,324	32,904,676	33,339,188	29,709,654	− 672,895	+ 1,327,390	+ 623,736	+ 3,208,420	+ 3,629,518	+ 8,722,204
(1) *British Territory*	34,069,189	33,469,541	33,243,880	29,876,600	30,268,227	26,485,732	− 427,222	+ 1,267,606	+ 366,980	+ 3,388,048	+ 4,042,403	+ 7,716,122
PATNA DIVISION	6,544,038	6,627,639	6,647,981	5,970,314	5,878,613	5,218,327	− 83,601	− 20,302	+ 334,268	+ 141,631	+ 632,286	+ 325,631
Patna	1,574,287	1,692,923	1,811,891	1,710,231	1,701,124	1,535,174	− 81,779	− 118,968	+ 101,660	+ 16,677	+ 166,970	+ 71,113
Gaya	2,256,920	2,147,778	2,141,147	2,149,414	2,137,979	1,950,118	+ 9,142	+ 6,631	− 8,267	+ 11,435	+ 187,861	+ 306,802
Shahabad	2,713,831	2,786,938	2,695,943	2,110,669	2,039,510	1,733,071	− 64,339	+ 90,995	+ 585,274	+ 129,159	+ 277,455	+ 980,760
TIRHUT DIVISION	6,949,765	6,979,031	6,869,200	6,860,158	6,933,765	7,001,035	− 29,266	+ 109,831	+ 9,042	− 73,607	− 67,270	− 51,270
Saran	2,339,253	2,398,670	2,420,541	2,503,897	2,577,467		− 59,417	− 21,871	− 83,356	− 73,570		
Champaran	1,940,241	1,979,142	1,978,512	1,999,416	1,977,998		− 38,901	+ 630	− 20,904	+ 21,418		
Muzaffarpur	2,754,945	2,753,214	2,741,199	2,741,177	2,641,650		+ 1,731	+ 12,015	+ 22	+ 99,527		
Darbhanga	2,913,329	2,847,005	2,729,948	2,615,668	2,736,650		+ 66,324	+ 117,057	+ 114,280	− 121,982		
BHAGALPUR DIVISION	7,846,923	7,848,282	7,570,811	7,016,172	7,526,811		− 1,359	+ 277,471	+ 554,639	− 510,639		
Monghyr	2,029,965	2,023,776	1,971,122	1,917,139	2,045,530		+ 6,189	+ 52,654	+ 53,983	− 128,391		
Bhagalpur	2,023,776	1,949,479	1,917,379	1,843,679	1,897,286		+ 74,297	+ 32,100	+ 73,700	− 53,607		
Purnea	2,021,696	2,062,671	1,962,671	1,902,183	1,944,995		− 40,975	+ 100,000	+ 60,488	− 42,812		
Santal Parganas	1,792,036	1,812,356	1,719,639	1,353,171	1,639,000		− 20,320	+ 92,717	+ 366,468	− 285,829		
ORISSA DIVISION	4,048,873	4,014,449	4,066,227	4,383,964	3,603,136		+ 34,424	− 51,778	− 317,737	+ 780,828		
Cuttack	2,064,078	2,037,539	2,092,334	2,222,570	1,849,998		+ 26,539	− 54,795	− 130,236	+ 372,572		
Balasore	966,896	942,681	963,727	1,004,373	842,870		+ 24,215	− 21,046	− 40,646	+ 161,503		
Angul	182,574	182,574	175,953	181,668	167,466		...	+ 6,621	− 5,715	+ 14,202		
Puri	834,851	845,655	834,213	975,353	742,802		− 10,804	+ 11,442	− 141,140	+ 232,551		
Sambalpur	780,564	745,935	739,925	899,960	799,999		+ 34,629	+ 6,010	− 160,035	+ 99,961		
CHOTA NAGPUR DIVISION.	6,653,626	6,005,362	4,900,429	4,628,198	4,233,850	3,147,690	+ 47,664	+ 704,933	+ 272,231	+ 394,348	+ 1,086,160	+ 3,505,936
Manbhum	1,276,956	1,231,809	1,217,061	1,164,781	1,168,745	771,972	+ 21,665	+ 14,748	+ 52,280	− 3,964	+ 396,773	+ 504,984
Ranchi	1,334,673	1,282,858	1,247,478	1,189,289	1,167,487	817,016	+ 51,815	+ 35,380	+ 58,189	+ 21,802	+ 350,471	+ 517,657
Palamau	722,384	712,935	717,730	647,213	611,613	423,545	+ 9,449	− 4,795	+ 70,517	+ 35,600	+ 188,068	+ 298,839
Manbhum	1,548,777	1,503,413	1,387,574	1,336,236	1,284,238	1,134,157	+ 45,364	+ 115,839	+ 51,338	+ 51,998	+ 150,081	+ 414,620
Singbhum	770,836	694,347	530,586	490,679	401,767	301,000	+ 76,489	+ 163,761	+ 39,907	+ 88,912	+ 100,767	+ 469,836
(2) *Feudatory States*	3,832,399	2,985,211	2,884,214	3,028,076	3,070,961	3,223,922	+ 847,188	+ 100,997	− 143,862	− 42,885	− 152,961	+ 608,477
Orissa States	3,697,179	2,854,023	2,755,022	2,892,204	2,934,089	3,081,372	+ 843,156	+ 99,001	− 137,182	− 41,885	− 147,283	+ 615,807
Chota Nagpur States	135,220	131,188	129,192	135,872	136,872	142,550	+ 4,032	+ 1,996	− 6,680	− 1,000	− 5,678	− 7,330

TABLE II.—Variation in Population since 1872—*concluded.*

District or State.	Males.						Females.					
	1921.	1911.	1901.	1891.	1881.	1872.	1921.	1911.	1901.	1891.	1881.	1872.
1	14	15	16	17	18	19	20	21	22	23	24	25
BIHAR AND ORISSA ...	*19,710,052*	*18,614,896*	*17,856,327*	*17,699,175*	*16,207,261*	*14,967,990*	*19,351,806*	*18,270,557*	*16,701,038*	*16,304,443*	*15,496,207*	*14,166,652*
(1) *British Territory* ...	*16,763,866*	*16,659,771*	*16,009,730*	*16,076,535*	*16,077,693*	*13,109,911*	*17,338,393*	*17,029,773*	*17,010,150*	*16,609,068*	*15,710,364*	*13,310,543*
PATNA DIVISION ...	*2,777,922*	*2,775,088*	*2,751,916*	*2,903,603*	*2,844,689*	*2,642,534*	*2,766,001*	*2,857,654*	*2,824,368*	*3,068,852*	*2,982,931*	*2,672,833*
Patna	897,701	899,614	883,431	966,018	957,442	770,023	705,584	797,996	818,010	902,223	896,193	756,742
Gaya	1,074,468	1,069,067	1,018,221	1,096,079	1,044,187	923,469	1,076,218	1,059,134	1,013,716	1,071,925	1,041,925	960,243
Shahabad	805,753	806,407	850,264	841,506	843,060	838,033	984,199	1,000,524	992,642	1,094,704	1,044,813	955,848
TIRHUT DIVISION ...	*4,846,543*	*4,779,153*	*4,716,473*	*4,746,316*	*4,599,368*	*3,939,004*	*5,108,776*	*5,193,869*	*5,101,227*	*5,093,846*	*4,709,257*	*3,963,031*
Saran	1,182,886	1,164,273	1,156,282	1,159,606	1,160,398	1,003,786	1,307,894	1,393,154	1,329,816	1,351,264	1,264,026	1,057,761
Champaran	956,479	1,047,113	988,247	1,001,153	951,677	737,870	979,179	994,756	981,784	981,781	850,981	710,248
Muzaffarpur		1,760,240	1,718,131	1,730,544	1,701,243	(1,391,101	1,647,054	1,744,214	1,747,191	1,707,708	1,511,722	1,195,006
Darbhanga		1,807,527	1,853,813	1,855,013	1,784,139	1,067,346	1,874,649	1,961,747	1,842,436	1,853,093	1,682,528	1,400,016
	1,956,951											
	1,956,719											
BHAGALPUR DIVISION ...	*3,369,196*	*4,023,093*	*3,892,707*	*3,857,653*	*3,673,910*	*3,323,704*	*3,927,850*	*4,084,643*	*3,950,953*	*3,913,316*	*3,685,316*	*3,295,752*
Monghyr	1,703,437	1,744,456	1,671,239	917,686	895,139	808,918	1,764,456	1,806,587	1,692,966	1,668,135	617,645	
Bhagalpur	1,014,844	1,037,491	1,027,835	1,004,464	979,706	917,693	1,017,744	1,061,561	1,011,650	1,767,431	940,200	899,448
Purnea	1,150,915	1,240,146	1,193,633	938,547	936,305	837,173	1,145,674	1,216,495	1,147,336	1,077,750	917,471	807,754
Santal Parganas ...	950,979	993,823	995,001	976,955	862,160	759,920	998,760	999,453	998,953	1,019,279	749,943	639,489
RIWA DIVISION ...	*2,350,723*	*2,476,321*	*2,429,605*	*2,393,095*	*2,344,324*	*2,180,720*	*2,618,030*	*2,655,465*	*2,559,334*	*2,372,130*	*2,199,640*	*1,822,426*
Cuttack	615,645	1,404,175	994,166	980,382	974,807	745,304	1,115,135	1,197,004	1,064,167	996,993	918,375	743,078
Balasore	467,137	474,125	414,790	443,054	443,686	380,132	514,543	490,951	453,151	444,151	404,521	331,193
Angul	100,340	98,972	98,051	93,756	91,750	89,777	101,084	111,702	98,824	96,730	79,012	70,197
Puri	456,643	500,107	481,179	474,430	449,624	389,600	431,104	456,807	421,193	421,978	413,908	340,972
Sambalpur	707,958	803,942	841,419	401,473	384,457	375,907	456,171	479,001	521,999	312,280	377,824	317,486
CHOTA NAGPUR DIVISION	*2,330,427*	*2,727,813*	*2,409,956*	*2,277,778*	*2,093,569*	*1,891,949*	*2,323,601*	*2,428,349*	*2,431,262*	*2,351,039*	*2,139,620*	*1,856,620*
Hazaribagh	434,751	539,105	470,119	506,504	444,903	397,045	663,915	659,506	607,879	597,577	559,500	474,550
Ranchi	648,601	677,336	676,222	631,414	629,171	577,827	778,[illegible]	771,747	780,[illegible]	770,777	684,969	600,241
Palamau	307,273	341,439	309,424	294,827	273,446	213,771	3[illegible]	[illegible]	[illegible]	[illegible]	277,652	213,796
Manbhum	739,844	765,437	654,466	600,199	452,328	332,253	743,[illegible]	[illegible]3,[illegible]	[illegible]	[illegible]	[illegible]	417,173
Singhbhum	200,058	303,496	299,725	271,417	293,621	280,343	276,860	280,[illegible]	311,[illegible]	274,671	227,604	150,860
(2) *Feudatory States* ...	*1,946,126*	*2,055,725*	*2,023,597*	*1,825,643*	*1,964,568*	*873,786*	*2,013,413*	*1,990,095*	*1,660,819*	*1,503,378*	*1,166,043*	*350,322*
Orissa States ...	1,871,762	1,981,446	1,942,453	1,751,215	1,890,271	827,324	1,935,790	1,913,675	1,590,438	1,437,606	1,102,151	304,251
Chota Nagpur States ...	74,364	74,279	81,144	74,428	74,297	46,462	77,623	76,420	70,381	65,772	63,892	46,071

TABLE III.—Principal Religions.

District or State.	Total Population.			Hindu.			Mohammedan.			Christian.			Animistic.		
	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BIHAR AND ORISSA ...	*37,961,858*	*19,710,052*	*19,251,806*	*31,[illegible],028*	*25,589,209*	*26,010,416*	*3,706,217*	*1,911,091*	*1,795,126*	*303,356*	*151,287*	*151,971*	*2,337,243*	*1,250,384*	*1,187,859*
(1) *British Territory* ...	*34,009,259*	*16,763,866*	*17,238,393*	*29,[illegible],[illegible]*	*23,[illegible],[illegible]*	*24,[illegible],[illegible]*	*3,690,182*	*1,907,729*	*1,782,453*	*293,129*	*138,407*	*154,722*	*1,981,009*	*1,044,164*	*936,845*
PATNA DIVISION ...	*5,543,923*	*2,777,922*	*2,766,001*	*5,[illegible],274*	*2,539,909*	*2,491,367*	*498,150*	*238,706*	*259,444*	*5,765*	*3,297*	*2,468*	...	...	...
Patna	1,574,797	897,701	706,096	1,[illegible],641	736,159	681,482	156,488	76,020	81,468	2,174	1,088	1,086	...	...	...
Gaya	2,183,990	1,074,468	1,079,522	2,[illegible],[illegible]	973,961	952,038	219,183	100,280	118,903	439	230	209	...	...	...
Shahabad	1,784,851	806,753	977,718	1,[illegible],[illegible]	829,789	857,847	122,479	62,406	60,073	3,152	1,979	1,173	...	...	...
TIRHUT DIVISION ...	*9,949,248*	*4,846,543*	*5,102,705*	*9,[illegible],077*	*6,727,484*	*6,815,593*	*1,206,732*	*621,639*	*585,093*	*4,892*	*2,229*	*2,663*	*6*	*2*	*4*
Saran	2,309,653	1,181,255	1,307,398	2,[illegible],[illegible]	1,201,548	1,267,748	274,219	132,540	141,679	873	367	506	...	...	...
Champaran	1,981,841	966,472	972,363	1,[illegible],[illegible]	618,772	638,438	208,733	104,374	104,359	3,763	1,336	1,426	...	...	...
Muzaffarpur	2,754,941	1,354,991	1,400,054	2,[illegible],[illegible]	1,564,957	1,615,173	246,902	124,503	122,399	619	422	197	3	2	1
Darbhanga	2,911,813	1,420,719	1,491,123	2,[illegible],[illegible]	1,337,206	1,294,234	276,763	132,712	144,051	231	104	127	...	...	...
BHAGALPUR DIVISION ...	*7,966,929*	*3,920,256*	*4,027,656*	*5,[illegible],[illegible]*	*3,956,721*	*3,876,734*	*1,268,017*	*703,090*	*564,927*	*18,029*	*7,560*	*7,629*	*329,150*	*168,057*	*170,229*
Monghyr	3,468,052	1,703,595	1,764,457	2,[illegible],[illegible]	930,680	930,621	242,930	89,906	80,135	1,648	813	737	6,941	4,010	4,624
Bhagalpur	2,052,770	1,014,284	1,038,486	1,[illegible],[illegible]	964,910	908,860	214,125	115,264	103,799	1,085	664	479	5,073	2,595	2,478
Purnea	2,054,574	1,043,233	981,372	1,[illegible],[illegible]	413,149	372,603	814,963	497,000	317,333	1,169	696	664	23,429	11,720	11,709
Santal Parganas ...	1,779,459	858,279	903,760	852,[illegible]	649,982	613,732	196,004	90,160	90,366	11,091	6,379	5,033	794,631	399,610	395,021
ORISSA DIVISION ...	*4,968,873*	*2,350,793*	*2,618,080*	*4,[illegible],[illegible]*	*2,260,646*	*2,216,070*	*177,759*	*84,421*	*93,345*	*6,209*	*3,814*	*4,395*	*67,646*	*37,625*	*33,431*
Cuttack	2,906,776	962,643	1,113,134	1,[illegible],[illegible]	927,981	1,024,234	64,414	28,840	35,574	2,446	1,006	1,440	55	35	20
Balasore	980,904	466,139	514,765	941,[illegible]	447,257	494,621	29,176	14,255	14,921	1,195	657	538	7,411	3,733	3,678
Angul	189,424	94,600	94,824	183,[illegible]	88,796	94,658	308	177	131	113	63	50	48,363	23,774	24,589
Puri	981,651	466,543	515,108	930,[illegible]	445,220	485,086	19,276	8,443	10,833	1,595	952	643	173	74	99
Sambalpur	910,118	360,868	380,251	774,[illegible]	350,992	309,511	3,618	1,823	1,886	9,112	1,936	1,724	5,641	3,031	2,610
CHOTA NAGPUR DIVISION	*5,453,208*	*2,729,427*	*2,723,781*	*4,[illegible],[illegible]*	*2,046,437*	*2,073,316*	*259,551*	*124,664*	*134,887*	*223,278*	*121,540*	*101,738*	*206,804*	*104,790*	*102,014*
Hazaribagh	1,275,241	634,751	640,490	1,[illegible],[illegible]	633,259	644,[illegible]	13,061	6,[illegible]	6,[illegible]	2,137	1,115	1,022	63,[illegible]	32,[illegible]	31,[illegible]
Ranchi	1,356,479	676,601	679,878	1,[illegible],[illegible]	579,174	578,[illegible]	10,311	5,[illegible]	5,[illegible]	197,[illegible]	96,[illegible]	101,[illegible]	123,[illegible]	64,[illegible]	57,[illegible]
Palamau	735,764	372,351	363,413	617,[illegible]	319,[illegible]	297,[illegible]	65,[illegible]	33,[illegible]	32,[illegible]	7,[illegible]	3,[illegible]	3,[illegible]	45,[illegible]	21,[illegible]	23,[illegible]
Manbhum	1,544,777	766,426	778,351	1,[illegible],[illegible]	736,736	691,[illegible]	90,[illegible]	45,[illegible]	45,[illegible]	4,[illegible]	2,[illegible]	2,[illegible]	29,[illegible]	15,[illegible]	14,[illegible]
Singhbhum	539,438	280,299	272,379	490,[illegible]	304,[illegible]	186,[illegible]	10,[illegible]	5,[illegible]	4,[illegible]	11,[illegible]	6,[illegible]	4,[illegible]	37,[illegible]	20,[illegible]	17,[illegible]
(2) *Feudatory States* ...	*3,952,599*	*1,946,186*	*2,018,413*	*3,[illegible],[illegible]*	*1,698,413*	*1,749,938*	*16,035*	*3,971*	*7,726*	*10,227*	*9,287*	*23,249*	*256,234*	*130,220*	*125,014*
Orissa States ...	1,867,173	1,871,183	1,995,990	2,[illegible],[illegible]	1,691,000	1,700,[illegible]	11,[illegible]	7,[illegible]	6,[illegible]	6,[illegible]	3,[illegible]	3,[illegible]	6,[illegible]	3,[illegible]	3,[illegible]
Chota Nagpur States ...	153,427	74,[illegible]	78,[illegible]	70,[illegible]	67,[illegible]	69,[illegible]	1,[illegible]	[illegible]	[illegible]	145	75	70	83,[illegible]	39,[illegible]	39,[illegible]

Note :—The balance of the population consists of 18,[illegible] persons (9,[illegible] males and [illegible],674 females) distributed as follows :—
Jhumijar 744 (419 males, 325 females), Aryo 8,[illegible] (males 8,[illegible], females 8[illegible]), Brahmo 2,[illegible], [illegible],[illegible] (males 1,[illegible], females 1,[illegible]), Buddhist 1,[illegible] (males 8[illegible], females 1,[illegible]), Christian 1,[illegible] (males 8[illegible], females 1,[illegible]), Jain 1,[illegible] (males 8[illegible], females 8[illegible]), Jew 1,[illegible] (males 8[illegible], females 8[illegible]), Sikh 1,[illegible] (males 8[illegible], females 8[illegible]), Zoroastrian (Parsi) 97 (males 66, females 31) and others 7,[illegible] (males 6[illegible], females 1,[illegible]).

TABLE IV.—Sex and Civil Condition.

	Unmarried.		Married.		Widowed.	
	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7
BIHAR AND ORISSA.	*6,494,039*	*6,325,169*	*9,085,659*	*9,390,267*	*1,130,354*	*3,536,370*
British Territory ...	*7,440,722*	*5,464,006*	*8,971,203*	*8,562,017*	*1,051,941*	*3,211,310*
PATNA DIVISION ...	*1,190,409*	*840,316*	*1,345,511*	*1,380,347*	*242,057*	*545,898*
Patna	329,078	221,761	402,135	393,445	76,438	182,390
Gaya	452,220	331,184	531,995	553,313	90,463	193,765
Shahabad	409,111	287,371	411,381	434,589	75,156	169,253
TIRHUT DIVISION ...	*1,963,664*	*1,423,077*	*2,503,053*	*2,709,261*	*319,897*	*905,357*
Saran	570,874	425,689	690,695	646,644	81,096	236,365
Champaran	441,968	330,629	470,483	441,749	56,027	159,736
Muzaffarpur	532,909	377,613	715,740	767,644	87,243	284,497
Darbhanga	429,113	293,946	626,144	914,135	95,462	284,759
BHAGALPUR DIVISION ...	*1,671,909*	*1,179,872*	*2,041,022*	*2,060,163*	*246,195*	*687,821*
Monghyr	394,781	267,867	537,875	571,249	72,924	185,319
Bhagalpur	367,194	247,189	586,610	583,633	70,571	188,575
Purnea	495,062	333,556	490,733	467,511	66,048	179,908
Santal Parganas ...	424,033	331,260	426,705	437,461	46,052	134,019
ORISSA DIVISION ...	*1,290,313*	*922,588*	*1,018,011*	*1,180,667*	*106,560*	*564,825*
Cuttack	531,127	396,061	392,532	486,867	38,864	250,187
Balasore	240,990	158,235	202,479	230,118	22,653	139,039
Angul	48,501	39,348	36,852	38,056	3,637	16,442
Puri	243,047	185,346	190,775	206,968	21,761	104,704
Sambalpur	172,688	143,590	195,373	196,659	19,634	61,323
CHOTA NAGPUR DIVISION.	*1,388,527*	*1,093,243*	*1,303,607*	*1,262,479*	*187,993*	*447,870*
Hazaribagh	291,217	219,088	299,110	323,760	33,694	109,207
Ranchi	353,473	297,330	371,285	281,364	35,634	97,188
Palamau	169,970	135,964	179,200	177,112	10,129	52,947
Manbhum	357,743	255,091	404,252	369,486	97,510	134,795
Singhbhum	216,119	184,970	150,694	140,757	18,226	53,743
Feudatory States ...	*1,053,317*	*861,073*	*814,456*	*897,350*	*78,413*	*325,060*
Orissa States	1,011,388	825,622	784,838	797,343	75,861	312,495
Chota Nagpur States ...	41,929	35,451	29,618	30,107	2,552	12,565

DISTRICT.	DISTRIBUTION OF LITERATES BY AGE.																	
	TOTAL.			LITERATE.			0—10.		10—15.		15—20.		20 AND OVER.		LITERATE IN ENGLISH.			
	Persons.	Males.	Females.	Persons.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
BIHAR AND ORISSA	*37,803,839*	*18,710,032*	*19,253,806*	*1,701,189*	*1,551,736*	*149,735*	*56,726*	*10,017*	*170,538*	*10,539*	*78,379*	*15,720*	*1,196,218*	*67,459*	*138,090*	*19 97*	*8,364*	
(1) *British Territory*	*34,007,189*	*16,763,866*	*17,243,323*	*1,536 227*	*1,452,553*	*103,706*	*51,607*	*9,616*	*159,383*	*10,537*	*73,893*	*14,721*	*1,107,438*	*62,537*	*122,062*	*113,915*	*8,147*	
PATNA DIVISION ...	*5,841,039*	*2,777,227*	*2,766,061*	*329,117*	*316,253*	*22,764*	*12,469*	*2,051*	*36,436*	*2,898*	*24,067*	*2,910*	*229,451*	*14,905*	*30,830*	*25,929*	*1,881*	
Patna	1,874,317	897,791	976,526	107,208	103,204	4,004	3,187	1,042	16,106	1,016	13,701	1,412	70,276	7,139	15,247	14,014	1,233	
Gaya	2,182,250	1,174,654	1,171,596	117,524	113,407	7,121	4,609	727	12,006	654	11,361	897	77,851	4,644	8,825	6,931	307	
Shahabad	1,784,471	886,782	897,689	84,381	81,642	4,521	2,783	282	10,161	828	10,005	601	62,028	3,142	7,758	7,319	777	
TIRHUT DIVISION ...	*9,949,268*	*5,146,131*	*4,803,137*	*393,691*	*369,010*	*24,681*	*14,353*	*2,136*	*39,668*	*2,617*	*29,011*	*3,022*	*272,976*	*16,401*	*26,579*	*25,389*	*1,197*	
Saran	2,309,913	1,152,305	1,157,608	101,147	97,366	6,883	5,049	468	10,250	612	10,350	681	71,716	4,158	7,616	7,147	369	
Champaran ...	1,960,541	989,478	971,063	74,403	69,216	5,187	3,504	547	6,608	390	5,637	478	51,972	3,881	4,901	4,597	304	
Muzaffarpur ...	2,374,945	1,224,091	1,150,854	120,613	111,631	8,982	3,823	726	10,993	1,063	10,422	1,110	76,859	6,813	7,654	7,316	338	
Darbhanga ...	2,943,869	1,481,258	1,462,611	197,527	190,797	6,730	2,977	395	12,817	552	12,602	750	72,429	1,549	6,408	6,329	79	
BHAGALPUR DIVISION ...	*7,880,142*	*3,950,776*	*3,929,366*	*326,787*	*296,996*	*29,791*	*11,515*	*2,051*	*33,913*	*2,454*	*26,521*	*3,251*	*224,997*	*21,035*	*27,766*	*23,449*	*3,337*	
Monghyr	2,429,765	1,207,670	1,224,095	109,518	94,791	8,019	3,524	610	12,655	1,000	10,449	829	68,691	5,334	8,190	6,476	854	
Bhagalpur	2,053,713	1,018,814	1,010,899	100,622	92,887	6,805	3,271	357	9,468	708	12,643	797	70,864	4,634	9,190	8,886	340	
Purnea	2,211,364	1,103,292	1,108,072	68,837	63,330	5,107	2,857	387	8,733	545	6,946	572	48,126	1,916	8,143	7,629	164	
Santal Parganas ...	1,185,300	620,979	564,300	47,810	45,988	1,860	1,863	197	2,057	201	1,483	153	7,316	151	2,243	2,158	79	
ORISSA DIVISION ...	*4,068,373*	*3,020,793*	*3,047,580*	*3,129,405*	*300,422*	*19,362*	*6,973*	*3,375*	*27,323*	*3,410*	*21,006*	*3,040*	*232,078*	*11,537*	*21,371*	*20,213*	*1,158*	
Cuttack	2,464,023	982,443	1,112,186	103,600	144,618	9,172	3,780	644	14,100	1,864	15,835	1,439	111,105	6,285	13,091	12,905	686	
Balasore	940,504	446,128	814,362	73,183	69,118	3,974	1,679	589	8,408	691	8,623	938	55,589	2,324	3,919	3,629	150	
Angul	187,574	88,600	98,964	4,746	4,486	260	72	23	445	70	676	68	3,495	147	541	378	13	
Puri	961,681	455,642	436,119	48,909	43,800	5,101	1,442	119	4,370	716	5,908	595	52,187	2,781	3,820	3,301	306	
Sambalpur	793,486	387,865	401,371	20,167	20,399	1,812	500	120	2,000	275	3,279	230	21,023	993	1,330	1,328	103	
CHOTA NAGPUR DIVISION ...	*5,823,020*	*2,820,497*	*2,823,091*	*216,545*	*198,740*	*17,805*	*9,095*	*2,015*	*22,451*	*2,058*	*16,248*	*2,855*	*145,096*	*10,830*	*20,216*	*17,242*	*2,974*	
Lohardaga	1,276,948	634,421	642,527	59,854	56,328	3,476	1,471	249	4,903	374	4,345	514	36,209	1,810	4,407	4,155	252	
Ranchi	1,334,473	656,251	678,222	43,545	41,307	2,238	1,871	640	5,383	2,060	3,707	778	29,345	2,740	3,908	3,379	529	
Palamau	733,794	367,731	366,063	20,203	19,219	1,004	776	111	2,449	128	1,981	151	13,971	680	1,256	1,190	66	
Manbhum	1,546,777	799,855	746,922	51,337	78,886	6,451	4,018	674	8,917	653	6,277	825	54,439	5,320	11,191	10,779	962	
Singhbhum	780,428	380,039	379,390	30,607	27,100	2,937	1,199	170	2,129	280	3,128	477	20,376	1,771	7,146	6,363	775	
(2) *Feudatory States* ...	*3,815,650*	*1,946,166*	*2,013,483*	*115,339*	*106,900*	*8,439*	*3,328*	*401*	*10,955*	*1,167*	*12,440*	*995*	*83,780*	*5,823*	*6,037*	*5,290*	*317*	
Orissa States	2,007,172	1,071,982	1,035,190	117,406	108,969	8,437	3,374	863	10,875	1,077	12,077	968	83,176	5,376	5,731	5,020	311	
Chota Nagpur States ...	157,497	74,504	79,193	2,027	2,021	2	144	19	200	20	373	31	2,904	149	306	270	6	

TABLE VI.—OCCUPATIONS. 264

DISTRICT OR STATE.	I.—EXPLOITATION OF ANIMALS AND VEGETATION.						II.—EXPLOITATION OF MINERALS.						III.—INDUSTRY.					
	Total workers and dependents.	ACTUAL WORKERS.				Dependents.	Total workers and dependents.	ACTUAL WORKERS.				Dependents.	Total workers and dependents.	ACTUAL WORKERS.				Dependents.
		Total.		Principal Occupation.				Total.		Principal Occupation.				Total.		Principal Occupation.		
		Males.	Females.	Males.	Females.	Both sexes.		Males.	Females.	Males.	Females.	Both sexes.		Males.	Females.	Males.	Females.	Both sexes.
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
BIHAR AND ORISSA.	*20,209,104*	*9,810,041*	*5,112,561*	*77,743*	*3,452*	*15,277,202*	*201,043*	*99,413*	*57,148*	*30,418*	*3,093*	*61,442*	*2,518,850*	*742,187*	*653,563*	*123,539*	*35,649*	*1,161,110*
(1) *British Territory.*	*17,630,006*	*8,760,963*	*4,536,941*	*16,890*	*3,079*	*14,352,707*	*198,086*	*87,581*	*50,836*	*19,403*	*3,029*	*60,245*	*2,159,981*	*647,790*	*566,974*	*114,717*	*29,007*	*1,011,217*
PATNA DIVISION ...	*3,971,643*	*1,925,883*	*674,813*	*3,023*	*470*	*1,972,387*	*7,078*	*3,066*	*1,901*	*227*	*129*	*5,609*	*562,035*	*179,893*	*106,716*	*23,991*	*5,973*	*278,746*
Patna	1,184,153	795,321	178,900	630	112	209,771	1,140	466	301	63	3	534	166,883	50,791	26,185	5,341	1,226	109,968
Gaya	1,548,539	477,791	311,714	666	176	758,191	76	26	16	24	1	472	309,543	84,784	39,097	8,816	1,671	90,113
Shahabad	1,078,951	651,240	254,199	346	222	678,125	5,113	2,060	1,584	155	125	4,603	281,679	44,318	41,434	9,834	3,076	79,667
TIRHUT DIVISION ...	*9,024,232*	*2,771,338*	*1,214,622*	*3,629*	*407*	*5,035,236*	*8,906*	*3,630*	*2,749*	*1,429*	*9,255*	*368,023*	*169,628*	*73,726*	*26,697*	*6,048*	*781,623*	
Saran	2,111,240	632,003	293,033	246	137	1,185,823	2,726	1,050	847	390	3,473	80,144	32,752	13,465	8,273	3,421	46,407	
Champaran ...	1,713,814	564,311	237,001	624	52	874,826	1,082	347	227	180	1,173	45,201	19,771	9,155	9,121	647	21,656	
Muzaffarpur ...	2,211,257	716,188	291,351	1,666	113	1,203,939	2,902	1,201	1,282	344	4,042	99,874	39,177	17,874	7,240	1,000	32,159	
Darbhanga ...	2,988,979	858,836	392,237	1,093	105	1,770,648	816	344	306	44	1,531	120,904	58,929	33,232	1,963	1,015	681,401	
BHAGALPUR DIVISION.	*6,469,962*	*2,088,422*	*1,263,629*	*1,280*	*125*	*3,206,289*	*3,715*	*1,473*	*1,029*	*228*	*69*	*3,231*	*275,804*	*119,476*	*63,146*	*13,085*	*3,763*	*176,133*
Monghyr	1,526,601	481,483	349,066	240	56	708,804	1,192	511	410	44	21	803	134,681	56,506	36,674	3,019	986	69,654
Bhagalpur	1,758,453	566,149	405,145	615	56	786,543	76	46	16	1	...	92	58,463	29,640	10,163	3,758	626	41,940
Purnea	1,242,279	523,967	307,767	146	21	411,398	70	32	19	4	...	34	47,844	20,731	12,415	1,709	246	11,727
Santal Parganas ...	1,942,629	516,823	201,651	279	42	1,299,544	2,377	884	584	179	48	2,302	74,811	32,599	17,894	4,599	1,905	52,811
ORISSA DIVISION ...	*3,025,236*	*1,230,162*	*224,499*	*3,078*	*425*	*1,201,073*	*664*	*261*	*125*	*57*	*...*	*278*	*562,982*	*135,830*	*170,050*	*34,988*	*5,049*	*255,456*
Cuttack	1,424,827	616,040	72,543	2,095	317	566,956	9	3	...	...	...	...	277,804	61,624	72,549	15,192	733	126,821
Balasore	761,748	316,017	38,920	2,168	64	291,711	1	1	...	...	...	...	48,601	13,843	31,854	6,794	498	31,457
Angul	164,160	61,161	23,916	240	41	77,777	3	3	...	...	...	...	15,259	3,751	4,716	1,116	221	5,456
Puri	289,647	79,852	84,617	1,241	15	125,920	23	8	...	...	...	...	25,196	6,758	7,318	917	61	11,276
Sambalpur	385,454	157,092	104,503	713	133	138,709	628	246	125	57	...	278	196,122	49,854	53,613	10,969	3,536	80,446
CHOTA NAGPUR DIVISION.	*4,070,132*	*1,647,066*	*1,159,629*	*3,034*	*612*	*1,963,627*	*183,672*	*76,436*	*46,809*	*7,749*	*1,502*	*46,376*	*906,110*	*109,734*	*60,738*	*10,931*	*5,932*	*724,153*
Hazaribagh	1,118,625	354,037	361,631	150	25	431,152	44,999	16,441	13,147	833	305	10,913	31,502	12,311	8,977	1,678	895	13,974
Ranchi	1,190,479	570,661	373,704	626	380	492,313	78	31	16	...	...	10	40,781	18,139	10,158	2,218	679	21,627
Palamau	576,919	248,043	137,131	660	92	291,696	672	251	168	6	1	16	27,054	11,205	10,153	2,087	1,272	15,389
Manbhum	1,151,342	356,943	250,653	612	74	543,746	137,454	58,248	33,049	6,907	1,196	35,296	796,053	67,307	31,132	4,948	2,986	672,680
Singhbhum	603,720	196,456	136,128	184	37	240,573	1,369	471	428	37	...	1,141	10,720	1,772	318	100	100	462
(2) *Feudatory States.*	*3,220,098*	*1,049,078*	*576,620*	*1,853*	*373*	*1,295,010*	*2,957*	*1,832*	*298*	*125*	*70*	*3,203*	*358,878*	*94,397*	*121,858*	*19,167*	*6,586*	*139,893*
Orissa States	2,057,783	1,016,101	544,796	1,853	1,354	1,534,911	2,900	2,901	1,681	125	66	1,715	349,564	91,186	132,296	18,771	6,174	136,643
Chota Nagpur States ...	157,497	74,504	79,193	2,027	2,021	69,099	57	31	11	...	10	18	9,623	3,359	2,963	396	411	3,532

TABLE VI.—Occupations.—*(continued).*

District or State.	IV.—Transport.					V.—Trade.					VI.—Public Force.				
	Actual Workers.				Dependants.	Actual Workers.				Dependants.	Actual Workers.				Dependants.
	Total workers and dependants.	Total.		Partially Agriculturist.		Total workers and dependants.	Total.		Partially Agricultural.		Total workers and dependants.	Total.		Partially Agricultural.	
		Males.	Females.	Males.	Females.		Males.	Females.	Males.	Females.		Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
BIHAR AND ORISSA.	234,154	210,435	23,407	11,124	3,805	348,253	1,449,815	396,833	381,388	35,290	10,319	671,891	103,593	43,115	3	10,511	...
(1) British Territory.	248,460	98,305	16,290	9,547	1,915	133,165	1,306,508	363,793	323,078	45,893	14,933	610,637	76,884	31,813	...	6,874	...
PATNA DIVISION ...	45,433	25,114	5,782	4,145	769	34,547	291,858	89,884	61,764	7,961	3,411	147,236	19,082	4,717	...	871	...
Patna ...	24,206	9,209	2,776	1,353	223	18,131	96,818	27,807	19,241	1,548	671	50,629	3,879	2,376	...	348	...
Gaya ...	24,167	5,836	2,005	1,037	305	12,479	96,826	29,367	18,723	2,408	809	48,431	3,913	1,814	...	311	...
Shahabad ...	16,340	6,364	1,049	756	156	9,942	98,191	28,680	24,746	3,367	1,731	46,756	3,743	1,258	...	367	...
TIRHUT DIVISION ...	25,923	10,726	397	1,791	60	14,809	257,462	70,430	63,692	14,186	5,937	192,340	10,554	4,821	...	1,216	...
Saran ...	8,998	3,375	99	563	36	3,905	60,332	15,157	15,614	3,870	3,090	28,461	2,325	968	...	319	...
Champaran ...	2,696	1,214	47	172	5	929	40,978	12,497	15,073	2,205	709	19,548	1,040	690	...	135	...
Muzaffarpur ...	6,778	1,945	109	403	13	2,906	60,118	19,443	14,453	4,064	904	34,080	3,064	1,332	...	278	...
Darbhanga ...	15,241	4,896	181	773	2	7,294	96,904	23,033	19,554	4,047	1,400	42,247	4,725	1,831	...	484	...
BHAGALPUR DIVISION ...	76,580	32,213	3,462	1,752	97	41,969	353,772	69,760	77,871	9,455	1,921	160,141	29,585	9,216	...	2,102	...
Monghyr ...	33,013	14,466	971	655	34	20,725	126,063	24,478	28,899	3,156	665	52,431	6,306	1,643	...	727	...
Bhagalpur ...	33,724	7,152	1,149	673	22	7,841	98,071	26,466	21,983	1,731	625	59,962	4,733	2,971	...	271	...
Purnea ...	12,923	6,160	1,533	146	4	5,775	61,313	14,764	16,336	4,139	236	30,778	6,045	3,663	...	707	...
Santal Parganas ...	10,940	4,375	809	278	34	4,008	68,325	13,951	7,653	1,431	395	16,441	3,000	1,421	...	407	...
ORISSA DIVISION ...	58,190	12,556	5,723	1,490	397	21,911	254,157	64,827	54,967	13,356	2,416	122,268	14,863	2,427	...	2,471	...
Cuttack ...	17,721	5,411	1,157	467	7	11,338	122,184	27,099	20,328	5,056	610	61,271	10,016	3,092	...	1,049	...
Balasore ...	6,172	1,576	772	203	23	2,815	44,913	11,974	14,868	3,151	454	20,918	2,112	715	...	211	...
Angul ...	1,963	439	121	93	80	499	5,613	1,329	1,346	172	135	1,779	1,127	430	...	139	...
Puri ...	6,180	1,044	347	301	11	3,801	40,964	12,967	10,618	3,210	1,004	24,121	1,254	264	...	64	...
Sambalpur ...	26,154	3,085	1,326	326	275	1,931	21,329	4,908	6,963	799	587	7,219	6,154	926	...	274	...
CHOTA NAGPUR DIVISION.	43,037	17,796	3,830	1,669	224	20,641	139,333	48,098	39,884	4,675	1,445	63,657	10,251	5,143	...	714	...
Hazaribagh ...	8,114	3,324	353	178	64	3,436	24,705	8,810	8,778	455	134	12,793	1,854	946	...	76	...
Ranchi ...	9,964	3,797	797	378	6	1,535	31,777	7,777	6,781	761	213	6,186	2,427	1,211	...	139	...
Palamau ...	5,447	2,223	431	201	80	3,677	24,526	7,017	4,705	676	204	11,311	1,855	927	...	174	...
Manbhum ...	17,237	6,546	1,476	678	310	7,461	44,954	16,156	10,143	1,441	474	27,715	3,541	1,109	...	196	...
Singhbhum ...	2,435	2,276	903	234	44	5,732	17,351	8,336	9,503	342	140	5,652	1,574	950	...	129	...
(2) Feudatory States.	5,684	29,180	2,417	2,277	290	15,087	143,307	33,040	58,310	5,997	2,980	51,957	33,009	11,302	3	3,537	...
Orissa States ...	36,079	11,909	2,184	1,264	251	14,986	141,141	32,577	57,953	5,902	1,961	51,312	32,909	11,253	3	3,528	...
Chota Nagpur States	606	271	233	13	39	101	1,966	463	357	95	99	645	100	49	...	9	...

TABLE VI.—Occupations—*(continued).*

District or State.	VII.—Public Administration.					VIII.—Professions and Liberal Arts.						IX.—Persons living principally on their income.					
	Actual Workers.				Dependants.	Actual Workers.					Dependants.	Actual Workers.					Dependants.
	Total workers and dependants.	Total.		Partially Agricultural.		Total workers and dependants.	Total.		Partially Agricultural.			Total workers and dependants.	Total.		Partially Agricultural.		
		Males.	Females.	Males.	Females.		Males.	Females.	Males.	Females.			Males.	Females.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
BIHAR AND ORISSA.	94,196	58,996	3,615	6,483	133	56,513	329,358	115,621	30,803	27,315	9,365	183,855	3,639	1,456	531	224	16	6,347
(1) British Territory.	76,439	27,753	2,661	3,495	75	46,624	298,543	103,347	29,928	23,027	8,674	165,268	7,390	1,226	770	164	8	5,324
PATNA DIVISION ...	27,443	10,725	1,470	1,164	22	15,748	83,440	27,421	9,353	6,139	938	46,464	679	96	81	4	2	508
Patna ...	14,591	5,456	798	634	9	8,228	29,867	9,024	3,696	1,665	291	15,243	191	45	51	...	...	160
Gaya ...	6,537	2,626	318	239	...	3,791	26,318	10,018	2,302	2,169	215	17,127	90	3	28	...	1	47
Shahabad ...	7,315	2,643	400	457	13	4,929	27,254	7,401	3,301	2,135	432	15,094	398	47	13	4	...	301
TIRHUT DIVISION ...	10,115	4,322	356	789	36	6,237	40,739	15,626	5,218	5,228	853	32,593	3,403	323	495	54	4	2,286
Saran ...	3,878	1,169	65	186	3	1,622	14,704	3,569	949	1,352	263	5,674	48	6	7	1	1	32
Champaran ...	1,077	573	6	83	1	1,077	5,987	1,541	474	1,141	141	1,602	71	5	6	...	...	66
Muzaffarpur ...	2,803	1,362	135	270	15	1,809	10,752	4,753	2,295	1,919	253	7,737	1,835	223	51	49	3	332
Darbhanga ...	3,669	1,218	32	198	1	1,449	13,430	5,560	1,718	1,784	220	8,116	1,701	89	471	2	...	2,256
BHAGALPUR DIVISION ...	6,354	3,001	161	345	...	5,159	46,073	15,697	6,584	3,427	459	23,723	495	106	29	12	...	361
Monghyr ...	1,993	601	37	44	...	1,818	13,273	6,967	4,093	1,415	219	11,819	95	18	6	6	...	77
Bhagalpur ...	2,056	1,970	90	130	...	2,196	17,140	5,054	1,437	986	126	8,040	196	52	19	6	...	154
Purnea ...	1,130	439	18	72	...	665	8,393	2,677	663	1,114	47	3,444	103	36	4	1	...	130
Santal Parganas ...	1,175	717	16	99	...	1,352	7,264	1,001	391	912	...	4,420	903	...	11	...	...	156
ORISSA DIVISION ...	26,176	7,586	349	1,185	13	10,970	93,648	33,032	8,741	6,570	789	66,073	1,617	374	35	77	1	1,308
Cuttack ...	11,580	3,620	90	992	1	8,111	64,872	16,641	1,046	3,548	53	27,475	1,145	222	26	66	...	979
Balasore ...	3,063	1,217	49	170	2	1,057	11,752	4,704	613	1,257	85	7,911	205	3	2	1	...	53
Angul ...	604	227	1	84	...	218	1,146	544	12	132	1	1,000	10	1	...	...	...	14
Puri ...	2,140	1,163	186	176	...	1,490	11,761	4,861	5,013	1,633	1	17,679	240	54	7	7	...	156
Sambalpur ...	8,849	1,369	23	663	10	1,094	4,117	1,282	57	1,000	649	11,008	19	94	...	13	...	96
CHOTA NAGPUR DIVISION.	6,360	2,919	905	109	2	3,993	30,643	13,601	3,730	1,563	255	16,313	1,196	333	151	53	3	723
Hazaribagh ...	2,901	810	145	30	...	1,299	8,146	1,618	361	192	98	2,173	78	24	5	...	...	47
Ranchi ...	1,797	638	17	61	...	774	7,997	3,173	883	435	29	2,976	577	194	94	9	...	179
Palamau ...	733	287	7	25	1	564	4,268	1,564	253	230	74	3,056	71	7	15	3	...	202
Manbhum ...	1,035	240	43	13	...	710	10,012	3,810	1,142	325	24	5,068	572	102	23	9	2	118
Singhbhum ...	895	944	9	9	1	356	2,050	1,345	109	156	...	1,906	178	67	4	9	...	177
(2) Feudatory States	17,680	6,965	954	987	57	10,489	30,815	12,274	874	3,448	691	17,587	1,249	229	61	40	8	953
Orissa States ...	17,474	6,823	943	956	57	10,451	29,725	11,990	861	3,307	691	16,454	1,242	228	60	40	8	949
Chota Nagpur States	206	142	11	31	...	38	1,090	284	13	141	...	733	7	1	1	...	...	4

District or State.	X.—Domestic Service. Total workers and Dependents.	Actual Workers. Total. Males.	Actual Workers. Total. Females.	Actual Workers. Partially Absent Persons. Males.	Actual Workers. Partially Absent Persons. Females.	Dependents. Both sexes.	XI.—Insufficiently Described Occupations. Total workers and dependents.	Actual Workers. Total. Males.	Actual Workers. Total. Females.	Actual Workers. Partially Absent Persons. Males.	Actual Workers. Partially Absent Persons. Females.	Dependents. Both sexes.	XII.—Unproductive. Total workers and dependents.	Actual Workers. Total. Males.	Actual Workers. Total. Females.	Actual Workers. Partially Absent Persons. Males.	Actual Workers. Partially Absent Persons. Females.	Dependents. Both sexes.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
BIHAR AND ORISSA	274,019	122,010	123,619	17,256	1,297	256,476	1,310,945	615,050	547,873	23,034	2,035	529,418	769,150	61,560	46,001	2,765	674	57,909
(1) *British Territory*	236,946	272,023	109,651	11,951	2,712	225,242	1,266,220	595,643	527,363	21,771	2,215	519,185	727,707	56,645	43,161	2,673	605	54,591
PATNA DIVISION	93,448	46,350	46,954	3,903	1,412	116,374	762,483	30,705	27,270	1,607	450	307,352	37,262	10,965	7,167	237	37	9,189
Patna	21,414	10,749	10,667	1,426	322	31,703	32,139	8,874	7,797	371	47	11,257	7,620	2,510	1,995	45	7	2,573
Gaya	1,99,21	21,229	19,976	1,478	771	58,013	208,205	64,961	64,228	941	231	130,311	18,764	6,791	3,050	93	18	5,878
Shahabad	45,843	24,372	23,311	979	321	27,658	32,747	7,130	6,960	295	90	11,784	8,744	2,764	2,122	77	12	2,468
TIRHUT DIVISION	77,198	36,316	35,028	3,374	210	35,304	73,274	32,720	31,828	902	282	32,903	32,723	23,973	9,247	1,047	318	10,293
Saran	24,435	8,003	6,466	853	226	12,017	13,913	3,126	3,037	95	26	6,932	3,903	1,156	1,146	274	47	1,542
Champaran	9,479	3,453	3,143	243	24	2,845	20,483	7,252	7,015	237	72	19,276	8,161	3,791	3,467	311	64	3,978
Muzaffarpur	29,847	6,215	6,981	1,452	55	12,796	7,091	1,660	1,598	148	52	5,566	5,611	2,028	1,722	151	41	3,470
Darbhanga	23,875	8,650	8,511	612	411	9,800	32,172	6,824	6,678	342	31	13,777	7,742	2,730	2,112	230	144	3,303
BHAGALPUR DIVISION	118,823	43,945	31,395	1,577	350	84,393	430,774	123,832	104,230	1,235	626	283,132	23,302	9,612	5,463	216	93	8,227
Bhagalpur	21,956	14,961	11,578	867	321	36,875	112,666	31,581	23,501	509	217	43,613	3,495	2,573	1,457	31	43	2,330
Monghyr	22,771	11,196	6,211	271	61	9,600	27,161	8,370	6,775	141	82	7,796	5,213	2,128	1,548	61	22	1,454
Purnea	53,178	15,457	11,472	341	24	7,922	240,161	58,745	54,488	485	327	191,723	10,612	4,911	2,458	124	28	4,443
Santal Parganas	12,491	2,643	2,165	108	134	6,295	30,586	6,135	5,466	100	200	30,000	4,980	1,200	1,218	60	24	2,099
ORISSA DIVISION	76,296	35,881	33,917	2,050	369	36,764	363,236	47,631	33,615	2,995	252	99,301	35,656	14,355	23,891	772	50	27,198
Cuttack	48,121	22,923	6,427	1,214	26	11,365	20,513	14,314	6,998	1,229	30	41,473	21,771	7,474	4,127	347	9	9,130
Balasore	12,462	6,966	7,264	211	23	4,653	20,838	12,691	6,211	614	13	17,915	6,338	2,579	2,011	201	30	3,154
Angul	1,273	615	650	23	1	1,256	361	179	90	11	...	279	117	101	78	4	...	142
Puri	12,614	5,283	5,568	451	1	4,645	72,574	19,727	5,415	621	28	39,634	7,744	3,981	1,675	185	11	7,161
Bamkhandpur	1,826	1,094	1,794	151	318	5,845	31,741	2,671	2,240	120	63	1,745	1,686	1,220	1,000	35	5	2,599
CHOTA NAGPUR DIVISION.	53,649	20,766	10,986	523	720	37,703	243,153	114,216	104,217	4,736	1,343	123,559	29,165	7,717	6,037	763	50	5,295
Hazaribagh	7,906	3,675	3,177	68	16	2,811	24,720	5,653	7,005	157	149	8,644	3,227	1,439	871	13	1	647
Ranchi	8,515	1,742	1,727	99	14	3,000	14,641	7,317	11,909	191	182	7,987	2,547	1,052	854	14	44	693
Palamau	6,777	1,598	1,130	43	23	2,112	120,469	24,107	26,747	158	113	45,500	1,954	673	521	13	3	475
Manbhum	9,611	3,443	3,173	222	61	7,980	121,461	47,624	21,815	3,131	571	41,795	9,155	2,199	1,732	67	32	3,591
Singhbhum	1,839	7,308	580	91	5	1,791	60,963	29,516	17,741	1,109	321	21,631	2,119	553	299	15	...	887
(2) *Feudatory States*	37,126	23,849	13,991	373	185	31,276	43,737	19,413	20,511	364	152	19,773	39,353	9,313	6,836	349	68	7,363
Orissa States	36,779	23,823	13,767	373	169	31,242	43,137	19,391	19,876	343	63	19,234	39,119	9,297	6,830	347	68	6,950
Chota Nagpur States	347	26	224	2	16	34	600	22	635	21	89	539	234	16	6	2	...	413

Description of Establishments.	—	Number of Establishments.	Total of persons employed.	Persons employed. Direction, Supervision and Clerical Staff. Managers. Executive and Artificers.	Managers. Inclusive.	Supervising and Technical Staff. Executive and Artificers.	Supervising and Technical Staff. Inclusive.	Clerical Staff. Executive and Artificers.	Clerical Staff. Inclusive.	Persons employed. Skilled Workmen. Males.	Skilled Workmen. Females.	Labourers. Males.	Labourers. Females.	Unskilled Labourers. Aged 14 and over. Males.	Aged 14 and over. Females.	Under 14. Males.	Under 14. Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
TOTAL	***BIHAR AND ORISSA***	1,046	167,703	62,773	304	610	640	2,230	55	6,906	425	3	67,529	8,064	50,349	23,170	5,027	6,374
I.—Growing of Special Products	*Total*	75	6,724	2,207	62	8	44	152	2	443	...	...	832	...	3,304	1,008	463	732
Tea plantations	...	8	881	300	6	1	4	1	...	25	...	...	30	...	106	271	11	185
Indigo plantations	...	66	5,819	903	55	4	40	96	2	413	...	...	802	...	3,427	594	452	69
Orchards	...	1	124	124	...	3	...	20	...	5	...	...	1	...	121	143	22	25
II.—Mines	*Total*	448	97,500	37,675	146	327	282	1,793	25	1,917	2	...	62,176	7,339	37,339	20,435	3,469	4,962
Coal Mines	...	290	73,152	30,179	98	247	206	1,353	13	1,445	2	...	57,123	1,514	29,251	13,152	2,621	3,476
Iron	...	4	2,136	1,722	2	1	1	20	1	34	...	...	148	98	2,140	1,413	228	274
Mica	...	1	1,000	1,000	1	1	1	1	...	1	...	...	1	...	1,000	...	1	1
Manganese	...	52	6,958	3,551	32	72	10	225	...	160	...	...	2,834	771	2,906	3,686	1,129	667
Red ochre	...	1	1,566	252	1	...	2	6	...	5	...	...	53	...	1,545	239	361	223
Kaolin	...	1	17	10	...	...	...	...	...	...	...	...	...	...	17	10	...	...
Copper	...	1	600	600	...	2	...	23	...	11	...	...	61	23	101	600	122	121
Chromite	...	1	2,113	2,113	2	...	21	9	1	72	3	...	307	8	1,447	208	361	66
		1	67	64	1	...	1	1	...	1	...	...	13	...	30	63	12	71
III.—Quarries of Hard Rock	*Total*	48	6,411	2,400	6	30	6	135	...	307	...	...	520	132	2,727	1,522	346	327
Stone quarries	...	41	3,772	2,112	5	24	3	126	...	96	...	...	322	125	2,721	1,730	343	316
Lime stone quarries	...	2	562	66	1	1	1	1	...	2	...	...	17	...	67	24	15	11
Slate mines	...	1	69	...	...	1	...	...	...	1	...	...	13	...	63	...	...	...
Slate	...	1	1,008	222	1	4	2	8	...	8	...	...	158	...	876	328	27	9
IV.—Textile and connected Industries.	*Total*	30	672	510	7	20	5	36	...	33	...	...	296	230	224	77	36	36
Cotton spinning mills	...	1	15	15	1	1	...	15	...	1	...	...	13	10	11	3	1	...
Cotton carpet manufactories	...	4	48	...	...	4	...	...	...	...	...	...	43	...	...	...	...	...
Jute presses	...	17	364	3	5	14	...	14	...	28	...	...	97	...	197	1	1	...
Coir factories	...	1	95	143	...	...	...	...	...	...	...	...	32	3	13	27	20	20
Hemp mills	...	1	61	14	1	...	...	...	...	1	...	...	8	...	12	11	4	6
Flax fibre works	...	1	10	...	1	...	1	...	1	1	...	...	10	...	...	...	...	...
Lace and embroidery works	...	1	...	105	...	...	...	...	...	...	...	...	...	206	...	...	...	...

Description of Establishment.		Number of Establishments.	Total Persons employed.		CLASSIFICATION OF PERSONS EMPLOYED.											
					Direction, Supervision and Clerical Staff.						Skilled Workmen.				Boys and Labourers.	
					Managers.		Supervising and Technical Staff.		Clerical Staff.		Europeans and Anglo-Indians.		Indians.		Aged 14 and over.		Under 14.	
			Males.	Females.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
V.—Leather, etc., Industries	Total	4	204	12	...	1	...	4	...	9	...	...	106	...	79	11	5	1
TANNERIES	"	3	190	12	...	1	...	3	...	7	...	...	106	...	68	11	5	1
Leather Factories	"	1	14	...	...	...	...	1	...	2	...	...	...	...	11	...	...	...
VI.—Wood, etc., Industries	Total	49	4,706	305	4	22	2	97	...	138	...	...	515	2	2,914	285	84	17
Carpet yards	"	6	954	87	2	2	1	20	...	16	...	...	203	...	390	72	22	10
Saw mills	"	4	317	6	...	4	...	6	...	4	...	...	71	...	231	6	3	...
Timber yards	"	29	2,219	208	2	15	1	30	...	105	...	...	177	5	1,480	106	44	7
Natal gutta Pipe Manufactories	"	1	36	...	...	1	...	...	...	...	...	...	...	...	14	...	...	...
VII.—Metal Industries	Total	62	28,316	3,775	27	34	127	3,211	9	1,045	276	3	17,600	...	19,586	3,595	719	170
Iron foundries	"	7	709	18	...	6	...	13	...	52	...	...	16	...	361	18	57	...
Iron and steel works	"	5	5,017	5,158	1	3	154	977	2	815	152	3	2,114	...	8,807	5,005	654	149
Machinery and Engineering workshops	"	30	7,022	149	25	5	12	860	6	178	44	...	3,469	...	5,541	649	128	44
Graphite factories	"	1	17	12	1	...	1	1	1	1	...	...	...	...	6	5	6	9
VIII.—Glass and Earthenware Industries.	Total	13	3,035	1,471	4	12	10	68	3	66	...	...	1,879	...	1,674	1,424	74	47
Brick factories	"	10	2,177	1,099	3	9	3	30	...	20	...	...	630	...	1,022	1,064	9	46
Tile	"	1	93	...	...	1	...	15	...	1	...	...	13	...	...	...	...	...
Fire brick factories	"	4	1,145	372	1	2	2	9	1	63	...	...	706	...	652	360	74	32
IX.—Industries connected with chemical products.	Total	173	5,207	1,772	19	29	16	239	...	124	2	...	1,952	360	2,611	1,368	232	104
Salt peter Refineries	"	33	2,0	19	...	11	...	23	...	23	...	...	174	7	284	21	21	1
Oil mills	"	33	134	64	3	15	...	15	...	54	...	...	231	...	47	43	3	3
Soap factories	"	1	26	...	...	1	...	4	...	3	...	...	18	...	6	...	...	...
Lac factories	"	111	2,7	1,704	7	19	2	7	...	43	2	...	1,433	61	1,5	1,1	154	73
Paint works	"	1	81	...	...	...	1	...	...	1	...	...	6	...	24	...	...	...
Coke ovens	"	4	7	28	4	...	12	6	...	14	...	...	100	...	1	3	7	6
Varnish factories	"	1	2	1	...	...	...	2	...	3	...	...	...	...	15	2	...	...

Description of Establishment.		Number of Establishments.	Total Persons employed.		CLASSIFICATION OF PERSONS EMPLOYED.											
					Direction, Supervision and Clerical Staff.						Skilled Workmen.				Unskilled Labourers.	
					Managers.		Supervising and Technical Staff.		Clerical Staff.		Europeans and Anglo-Indians.		Indians.		Aged 14 and over.		Under 14.	
			Males.	Females.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
X.—Food Industries	Total	99	9,304	984	20	33	67	141	15	365	...	...	1,857	27	6,246	841	426	120
Flour Mills	"	5	143	4	...	1	3	2	...	16	...	...	58	...	61	4	...	...
Rice Mills	"	13	2,0	67	...	1	2	21	...	21	...	...	74	...	2	6	...	...
Sugar Refineries	"	1	4,0	90	1	1	...	...	...	1	...	...	1	...	3,1	2	1	...
Breweries	"	4	1,0	30	1	3	2	6	...	14	...	...	76	...	1	3	4	...
Tobacco works	"	5	1,2	652	1	1	4	7	...	21	...	...	187	...	4	6	1	...
Tea and Coffee Factories	"	17	4	20	2	...	10	17	...	21	...	...	72	...	2	...	6	...
Cigarette	"	15	1,5	221	1	5	1	9	...	16	...	...	17	6	1,1	1	1	1
Bath	"	35	1,0	40	...	6	...	...	...	3	...	...	44	...	1	9	9	...
XI.—Industries of Dress	Total	5	340	32	1	3	...	13	3	6	...	...	202	13	100	...	6	...
Tailoring Works	"	3	1	1	1	1	...	1	1	1	...	...	41	...	18	...	...	...
Button Factories	"	2	1	13	...	2	...	11	...	5	...	...	161	13	4	...	6	...
XIII.—Industries Connected with Building.	Total	12	2,205	530	6	6	4	10	...	22	...	...	76	18	972	303	207	119
Lime Works	"	11	1,1	5	5	5	2	10	...	22	...	...	61	18	951	3	1	119
Concrete Pipe Factories	"	1	3	1	1	1	2	...	...	...	...	...	4	...	21	1	1	...
XIV.—Construction of Means of Transport and Communication.	Total	4	11,203	8	1	1	17	16	10	440	193	...	3,518	...	7,064	8	15	...
Railway Works	"	1	11,1	8	1	...	16	...	10	427	124	...	3,753	...	7,0	8	11	...
Motor Car Works	"	3	9	...	...	1	...	16	...	13	7	...	6	...	6	...	4	...
XV.—Production, Application and Transmission of Physical Powers.	Total	6	653	32	4	1	6	4	2	24	...	...	373	...	238	12	2	...
Ice Factories	"	2	4	1	2	...	2	...	1	6	...	...	14	...	14	...	1	...
Electric Works	"	4	9	11	2	1	4	4	1	18	...	...	280	...	204	12	1	...
XVI.—Industries of Luxury	Total	37	1,227	3	6	27	5	45	...	125	...	...	227	...	470	3	13	...
Printing Presses	"	30	1,0	3	4	26	4	44	...	123	...	...	173	...	2	2	13	...
Jewellery Work Shop	"	1	2	...	...	1	...	1	...	2	...	...	4	...	17	...	...	...

CHAPTER XI.

The Archæology of the Province.

THE political history of the province reaches back to the commencement of the historical period, about the middle of the 7th century B.C., and its archæological remains are noteworthy as embracing some of the earliest monuments extant in India.

Saisunaga dynasty.

The earliest dynasty to which some historical reality may be accredited is that given in the Vayu Purana as the Saisunagas; but of the founder Sisunaga and his four immediate successors nothing whatever is known beyond their names. Bimbisara, the fifth of the line (c. 520-490 B.C.) is reputed to have built New Rajagriha, in the Patna district; but of the earlier city, known as Old Rajagriha, the fragmentary walls of which still crown the hills encircling it, the original founder is unknown. The inner walls of the old city were contained within the plain bounded by the enclosing hills; while the outer fortifications have been traced by Sir John Marshall over a distance which agrees closely with the 150 *li* (approximately 30 miles) mentioned as the length of their circuit by Yuan Chwang, the Chinese Buddhist pilgrim who visited the locality early in the 7th century A.D.

Rajagriha.

The old city.

The fortifications, which are built of massive undressed stones, are standing at their greatest height—about 12 feet—on the east and west of the Banganga pass, and it is here that the greater number of the original bastions are still to be seen. Other features of interest in the walls are the stairs or rather ramps, which give access to the top. Watch towers, erected at a later date, are also in evidence; and conspicuous among them is the tower on the Vaibhara hill, which has been identified with the "Pipala Stone House" described by the pilgrims Fa Hian (405-11 A.D.) and Yuan

Chwang (630-45 A.D). It is in this structure that the Buddha is reputed to have dwelt while at Rajagriha.

Its close connection with Buddha.

Bimbisara was the contemporary of both Gautama Buddha and Mahavira, the founder of Jainism, and his capital Rajagriha is the scene of many incidents and traditions associated with the Sakya sage. It was at Rajagriha that Buddha first studied under the Brahmans Alara and Uddaka; and here, after his enlightenment under the *Bodhi* tree at Bodh Gaya, he used to spend his time in retreat, his favourite resorts being Veluvana, or the "Bamboo Grove," and the hill called Gridhrakuta, or the "Vulture's Peak." At Rajagriha he often preached and taught, the king Bimbisara being among his disciples. Here, too, it was that he survived the attempt of a Jaina ascetic to poison him, and escaped the death-trap of the fiery ditch. It was here that the Buddha was attacked by the maddened elephant—a plot against his life instigated, it is said, by his envious cousin Devadatta, in collusion with the king Ajatasatru. And here, at the Sattapani cave—the site of which has been identified by Sir John Marshall with the structural remains on a spur on the north face of the Vaibhargiri hill, a little over a mile from the "Pipala Stone House"—was held the famous conference of the Buddha's disciples after the Nirvana, to collate and record the tenets of the Faith.

The Sonbhandar cave and Maniyar Math.

The Sonbhandar cave at the southern foot of the Vaibhargiri hill is a Jain monument, and appears to have been excavated in about the 3rd or 4th century A.D., the characters of the inscription near the entrance door being assignable to this period. The so-called Maniyar Math, a brick monument of the same approximate date and situated in the centre of the city plain, appears to have been a colossal phallic emblem. On its excavation by Dr. Bloch in 1905 its sides were found to contain stucco figures of Nagas, Ganesh, and a linga; the prevalence of Nagas, traditionally the guardians of hidden treasure, lends support to the local legend that the monument is the treasure house of a mythical king. Another interesting relic contained in the old city of Rajagriha is the "Shell inscription" cut into the rocky path through the Banganga defile. Up to the present the epigraph remains undeciphered.

Outside the northern entrance to the valley containing the old city, and some two-thirds of a mile therefrom, is situated New Rajagriha, which was also protected by a wall of massive masonry. It appears to have resembled an irregular pentagon in shape, with a circuit of nearly 3 miles. On the south towards the hills a portion of the interior was cut off to form a citadel, and here some sections of the stone walls are still in fair preservation.

The new city.

It is to the king Bimbisara that the rise of Magadha—a territory co-extensive with the modern province of Bihar—to political predominance in northern India is attributed. He strengthened his position by matrimonial alliances with the neighbouring States, taking one consort from the royal family at Kosala, and another from the influential Lichchavi clan at Vaisali. His successors continued to increase the political importance of Magadha, and in the 4th century B.C. the Kosala State and subsequently the kingdom of the Lichchavi's were reduced to submission. The site of the Lichchavi capital Vaisali has been identified with the modern Basarh, and excavations carried out by Dr. Bloch in the year 1903 went far to establish proof of the correctness of this identification; though the remains disclosed did not antedate the Gupta period of the 4th century A.D.

Vaisali excavations.

The work was continued by Dr. Spooner in 1912 who, like Dr. Bloch, was successful in bringing to light a great number of inscribed seals, clay figures, and pieces of pottery, among which one seal is ascribed to the 3rd century B.C. The total number of these seals thus recovered exceeded 1,200; but unfortunately very few remains of structural buildings were disclosed, and the regrettable circumstance of the relatively high level of the sub-soil water present at the site prevented the excavations being carried down to a greater depth than 18 feet from the surface. Among these meagre fragments were, however, a finely polished black-marble door lintel and a fragment of dressed sandstone bearing the magnificent polish which is associated with the Emperor Asoka (3rd century B.C.).

To Ajatasatru, the successor of Bimbisara, is ascribed the erection of a fortress at the village of Patali on the banks of the Ganges; and within the shelter of this fort was afterwards founded by

his grandson Udaya (c. 435-400 B.C.) the city of Pataliputra—the modern Patna.

Of the remaining members of the Saisunaga dynasty little but their names is known, and the next ruler of outstanding personality in this part of India is Chandragupta, the founder of the celebrated Mauryan Empire, which rose to prominence under his rule after the retreat of Alexander and the expulsion of his lieutenants from the country about the Indus. It is from this time the imperial history of India begins, and Pataliputra attains distinction as the capital city of an empire extending from the Hindukush across India to the Bay of Bengal.

Mauriyas : Chandragupta.

The ancient imperial city, it would appear, was situated on a long strip of high-lying land, about half a mile north of the village of Kumrahar, which stretches from Bankipur eastwards, a distance of some 8 miles, over the site of the present city of Patna. It was apparently bounded on the north by the Ganges and on the other sides by a deep moat. It was defended by a massive palisade of timber pierced by 64 gates and crowned by 570 towers. The royal palace, although chiefly constructed of timber, was considered by Megasthenes to excel in magnificence the palaces of Susa and Ekbatana in Mesopotamia, its gilded pillars being adorned with golden vines and silver birds. The building stood in an extensive park studded with fish ponds and furnished with a great variety of ornamental trees and shrubs.

Pataliputra.

Chandragupta was succeeded by his son, known as Bindusara, but of his reign no details are available. His successor Asoka (c. 269-232 B.C.) is perhaps the most outstanding figure in all Indian history. His conquests were those of peace rather than of war, and his single military expedition into Kalinga (a territory roughly embracing the modern Orissa and the northern part of the Madras Presidency) forms the subject of a remorseful lament in one of the many lithographic records he set up throughout his dominions. To Asoka is due the spread of the Buddhist creed throughout the then known western world; and his missionaries were despatched to the kingdoms of southern India, to Ceylon, and to the Hellenistic monarchies of Syria, Egypt, Cyrene, Macedonia and Epirus.

Asoka.

Edicts of Asoka.

The celebrated edicts of Asoka, incised on rocks and highly polished monolithic pillars, are almost the only material vestiges of his period that have survived. The edicts are devoted mainly to the exposition, inculcation, and enforcement of a scheme of practical ethics which Asoka called *Dhamma*, an expression which may be translated by the term "Piety". The leading tenet of Asoka's Buddhism was the doctrine of the absolute sanctity of animal life as an integral phase in the continuous sequence of birth and re-birth of all creatures from the lowest form of life to the highest; a doctrine associated with the belief that the mode of re-birth was conditioned by the net ethical result of the life of each creature at its termination. And in the enforcement of this doctrine among his subjects Asoka, with a somewhat twisted logic, did not hesitate to resort to capital punishment. A second cardinal doctrine insisted on was the obligation of reverence to parents, elders and teachers; and mutual courtesy between all men, irrespective of their social position. A third primary duty laid upon men was truthfulness. Toleration for the beliefs and practices of others was also inculcated; and the subjects of the Imperial moralist were solemnly warned not to speak ill of their neighbour's faith.

Barabar caves.

As a practical instance of the application of this principle, the Emperor himself bestowed costly gifts upon the Ajivikas, a sect of self-mortifying ascetics more nearly allied to the Jains than the Buddhists; and an inscription in the caves at Barabar (near Gaya) records the Emperor's gift to this sect of the rock dwellings excavated in the hard quartzose gneiss of these hills, and finished internally with a high polish throughout.

Excavations at Kumrahar.

Asoka's palace at Pataliputra is believed to lie to the south of the capital, and to have extended from the mound called Panch Pahari to Kumrahar, with further extensions to Bulandibagh as far as Prithvipur, covering an area of some 4 square miles. Fragments of old brick walls, wooden bridges, and piers along the ancient moats which surrounded and intersected the old city were unearthed by Colonel Waddell between the years 1892-99, as well as a colossal quasi-Ionic capital of Greek style, and fragments of a great sandstone pillar bearing the polished surface associated with Asoka.

The excavations carried out by Dr. Spooner between the years 1912-16 at Kumrahar were of exceptional interest as disclosing the site of a palace of the Mauryan period (321-184 B.C.) which may be ascribed to the Emperor Asoka, or even to his predecessor the founder of the Mauryan dynasty, Chandragupta.

Asoka's hall of a hundred columns.

Asoka, we know, erected in his capital Pataliputra as one of the many buildings of his palace enclosure, a stately hall of a hundred columns. Definite indications of such a structure—albeit of an indirect nature—came to light during Dr. Spooner's operations; but owing to the exceptional subsidence of the building its great monolithic columns of polished sandstone were traceable only in the pillars of ash and debris that their descent into the earth caused to be formed in the hollow spaces so left. The superstructure of this building appeared to have been composed of logs of wood, the burning of which in a huge conflagration which subsequently ensued resulted in the ashes referred to above. For some considerable period previous to this final destruction of the building by fire the whole site was flooded over, as is apparent through the circumstance of a silt deposit of some 9 feet in depth spread over the site. Subsequently the area so silted over was reinhabited by the Imperial Guptas (320-455 A.D.), remains of whose brick buildings were found nearer to the surface.

Compared with palace at Persepolis.

The point of exceptional interest in these excavations was the analogy traceable between the remains disclosed and the celebrated ruins of the palace of Darius (521-485 B.C.) at Persepolis, the capital of the Achæmenian dynasty of ancient Persia. The similarity of the Kumrahar remains with his famous "Hall of a Hundred Columns" was very marked; while the general disposition of his palace buildings would seem to have been followed also, as revealed in the configuration of the mounds still existing at Kumrahar.

Other finds at Pataliputra.

Unfortunately, the great difficulty met with in any attempt at further excavation of the site, owing to the high level of the subsoil-water and the annual floods which submerge it, has operated to prevent further work being carried out up to the present. Among the more interesting finds obtained from the excavation here were

a number of coins ranging in period from primitive punch-marked and anonymous cast coins down to those of Shah Alam Badshah, and include one of the primitive coinage of Kosam, *circa* 2nd century B.C., which is probably unique, as well as two copper coins of Kaniska, and one of the Gupta Emperor Chandragupta Vikramaditya (375-413 A.D.). The discovery of a coin of the Kushan Emperor of North-West India at Patna is of considerable interest, though we know his kingdom embraced Gaya. Numerous terracottas and pieces of pottery of the Gupta period were also recovered during the excavations.

Excavations at Bulandibagh

Excavations were also undertaken at the same time at the Bulandibagh and Panch Pahari sites mentioned above. At Bulandibagh the operations were successful in disclosing the remains of a large timber house, the wooden flooring of which, extending to a distance of some 350 feet, was found at a depth of 22 feet below the surface in the alluvial clay. It is the generally accepted belief that stone was introduced largely into Indian Architecture during the Mauryan period, previous to which all buildings were principally constructed of wood. Finds at this site were numerous and interesting, and included some 200 coins consisting in the main of the "early rectangular cast" type which are among the earliest yet discovered in India; a chariot-wheel, wooden sandals, a number of well-preserved knives and many early terracottas, which include elaborately modelled dolls and female heads.

and at Panch Pahari.

At the other site at Panch Pahari Dr. Spooner's excavations revealed the existence of two ruined *stupas* contained in the great mound, and built on what seemed to be an extensive terrace, formed originally of *kachcha* bricks. The remains were identified with the Asokan period through the discovery of polished sandstone column fragments characteristic of that time. A few coins were also discovered, as well as an early type of *triratna* symbol buried deep down in the centre of one of the stupas. The peculiar nature of the site, and the great depth to which further excavation would have to be carried into the heart of the mound, made the continuation of the work an expensive matter, and as it seemed doubtful whether the results to be expected would justify the cost, the site was abandoned for the time being.

A monument which is traditionally associated with Asoka is the Agam Kuan in the Patna city, though the present superstructure is Muhammadan in character, and there is little to connect it with Mauryan times. It has been identified with Asoka's "fiery hell"; and, according to the legend recorded by Yuan Chwang in the 7th century A. D., Asoka is said to have become converted to Buddhism through witnessing the escape unscathed of a Buddhist monk whom he had cast into this furnace. It is possible that the site marks the location of the royal slaughter house or out-kitchen.

Asoka's hell; Agam Kuan.

Other remains of Asoka's period still extant within the province are the sandstone pillars at Lauriya Nandangarh, Lauriya Araraj, and Rampurva, in the Champaran district, containing the seven pillar edicts. In 1913-14 active steps for the preservation of the pillar at Rampurva, which had long fallen, were undertaken, and the two broken portions of the huge shaft dragged from the river bed where they had lain partially submerged, and carried up to a high mound in the neighbourhood, where a suitable loggia-shelter of brick was erected to cover that portion of the pillar engraved with the inscription.

Edict pillars at Lauriya Nandangarh; Lauriya Araraj; and Rampurva.

These pillars, together with a similar but uninscribed pillar at Kolhua in the Muzaffarpur district, marked the stages of the journey to Nepal which Asoka undertook in the 21st year of his reign, in order to visit some of the holy sites of Buddhism.

Pillar at Kolhua.

At Dhauli, again, in the Cuttack district of Orissa, is an inscription of the special "Kalinga Edicts" added to the first ten of the general rock edicts, and replacing edicts XI, XII, and XIII of that series, which were deemed unsuitable for local promulgation. These excised edicts contained the expression of the Emperor's remorse for the misery and suffering he had been instrumental in inflicting upon the people of Kalinga during his war in their territory.

Dhauli edicts.

Another monument of this period is a number of mounds, which conceivably marks the site of an extensive monastic establishment, in the defile known as the Hasra Kol, by the side of the Sobnath hill, in the Gaya district. The

Sobnath Hill (Kukkutapadagiri.)

Sobnath hill, on which is another mound, has been identified by Sir Aurel Stein with the Kukkutapadagiri hill of Fa Hian and Yuan Chwang, where Kasyapa, the earliest and greatest of Buddha's disciples, lies buried.

Other monuments of Asoka are the minor rock edict inscribed on the Chandan Pir Shahid hill, at Sassaram; and the Vajrasan throne, and the fragments of the stone railing enclosing the temple at Bodh Gaya. The present temple, which is said to resemble substantially the earlier temple restored in the 11th century, was thoroughly repaired by Government in 1884 at a cost of 2 lakhs. The monument has not been notified under the Ancient Monuments Preservation Act, VII of 1904, but as a special case, is maintained by the Bihar and Orissa Government from provincial funds.

Minor Rock edict at Sassaram.

Bodh Gaya.

The next monument in chronological sequence existing in the province is the cave-dwellings excavated by Asoka's grandson Dasaratha in the Nagarjuni hills, again for the use of the Ajivitas. The dedication of these caves is recorded in an inscription engraved on the rock containing them. The Nagarjuni hills are said to derive their name from the circumstance of Nagarjuni, the famous Buddhist teacher of the Mahayanist school, who dates from the 2nd century A.D., having lived in one of the caves here.

Dasaratha : Nagarjuni caves.

Four princes of the Mauryan line succeeded Dasaratha, but they are mere names. The empire seems to have broken up very soon after Asoka's death, and his descendants retained only Magadha and the neighbouring home provinces.

The Mauryas were succeeded at Magadha by the Sunga dynasty. The capital continued to be Pataliputra, and the kingdom probably embraced the territories of the Gangetic basin corresponding with modern Bihar, Tirhut, and the provinces of Agra and Oudh.

Sungas.

The reign of the first Sunga king, Pushyamitra, is noteworthy for the apparently unsuccessful invasions of his territories by Menander, the Greeko-Bactrian king of Kabul, and again by Kharavela, king of Kalinga.

A monument of this latter king exists in Orissa among the Udayagiri hills, where in the rock-cut cave known as the Hathi-gumpha there is an inscription recording his name and titles, and containing an account of the principal events of his reign. According to Pandit Bhagwan Lal Indrajit, the record purports to give the biography of Kharavela, king of Kalinga, up to the 13th year of his reign, and is dated in the year 165 of the Mauryan era, *i.e.*, sometime between the years 158 and 153 B.C.; it shows that on the downfall of the Mauryas Kalinga revolted and became an independent kingdom. Other authorities, however, deny the existence of the dates given by the Pandit; but it appears to be admitted generally that the inscription belongs to about the middle of the 2nd century B.C.

Udayagiri caves (Orissa.)

Other noteworthy caves of this group are the Bajadara or Musician's cave, and a cave with an elephant frieze (Chota Hathi); the Manchapuri or "earthly cave" which contains an inscription of Vakadipa, king of Kalinga (probably the successor of Kharavela) entitled Mahameghavahana, literally, having conveyances or elephants like big clouds, as well as another epigraph recording the name Vadukha, probably his son. Still another inscription in the Swargapuri cave, or "house of heaven", records the cave's having been made for the Kalinga monks as a gift to the Arhats by Kharavela's chief queen.

Of all the caves at Udayagiri, which are 19 in number, the Rani Gumpha, or Queen's palace, is the largest and most richly carved. It comprises two ranges of rooms on three sides of a quadrangle. Both upper and lower storeys of the caves contain a series of rooms in each of the three sides; and the upper storey is set back over the rocky mass behind and not placed immediately on the lowest storey. The verandahs in front of the caves are ornamented with figures of guards; and the images of the goddess Ambha sitting astride a lion, and Indra on a bull or elephant, have been identified in the upper storey. In the spaces enclosed by the arches above the doorways in the interior of the caves are carved various figures of men and animals, and flowers and fruits; and the arches are joined by a frieze of "railings", above which runs another band of scenes carved in low relief. The sculptured frieze in the lower main wing of these caves has been

The Rani Gumpha cave at Udayagiri.

thought to indicate the procession of a saint through the town during some religious festival; and as in this hill Parasvanath appears to be the most honoured of the Tirthankaras, it has been conjectured that the scenes are somehow connected with him, or one of his revered disciples. Another frieze in the main wing of the upper storey has been thought to portray incidents connected with the marriage of Parasvanath; but the precise meaning of these scenes has yet to be settled.

Khandagiri caves.

In the neighbouring group of excavations called the khandagiri caves, is the Navamuni, or cave of the nine saints, which contains a 10th century inscription mentioning the name of the king Srimad Udyota-Kesari-Deva, and a row of ten images of the Tirthankaras with their consorts below them, the principal figures being Parasvanath sheltered by serpent hoods.

The Barabhuji cave.

A similar group of sculptures occurs in the Barabhuji cave, as well as a twelve-armed female image, from which it derives its name; and another group of 24 Tirthankaras is carved in the Trisula cave, where Parasvanath again is given the position of honour; while the symbols of this saint are again prominent in the carved decoration of the Lala Tendu cave near-by. The prominence given to Parasvanath in the sculptured remains is noteworthy in this early example of Jaina iconography.

Ten kings are recorded of the Sunga dynasty, but none with whom any important historical record is associated; and the line came to an end about 72 B.C.

Gupta dynasty : Chandra-gupta.

Of the history of Magadha from the time of the Sungas down to the accession of the Guptas practically nothing is known; but with the rise of this dynasty the kingdom enters again on a period of splendour. This dynasty was founded by Chandra-gupta, a local Raja at or near Pataliputra. He wedded about the year 308 A.D. a princess of the ancient Lichchavi clan, and was raised by this connection from the rank of local chief, enjoyed by his immediate ancestors, to such degree as to permit of his assumption of the rank of Lord Paramount. He extended his dominions along the Gangetic valley to the junction of the Ganges and the Jumna at Allahabad, and ruled during the six years or so of his reign a territory embracing Tirhut, Bihar, Oudh and certain adjoining

districts. On his death, in about the year 326, he was succeeded by Samudragupta, his son by the Licchiavi princess, and this king and his immediate successor Chandragupta II Vikramaditya, who succeeded in 375 A.D., further extended the Gupta empire westwards, until it reached the Arabian Sea.

Samudragupta.

There are indications that Pataliputra, though probably still regarded as the official capital, ceased to be the ordinary residence of the Guptas after the extensive conquests effected by Samudragupta; and that Ajodhya (the modern Fyzabad in southern Oudh) enjoyed this distinction, as being more central and convenient for the headquarters of the Government. Pataliputra, however, continued to be a magnificent and populous city throughout the reign of Vikramaditya, and was not finally ruined until the time of the Hun invasions in the latter part of the 5th century A.D., from which date it practically disappeared until it was rebuilt a thousand years later by Sher Shah.

During the reign of Kumaragupta (c. 413-455 A.D.) the Gupta dominions suffered severely from the irruption of the Hun hordes, who burst through the north-west passes and spread as a disastrous flood all over northern India, and his successor Skandagupta may be considered the last of the kings of the golden age of the Guptas, glorious in literary as in political history,—a period marked by the rise of Sanskrit as a medium of literary expression, and the decline *pari passu* of the more popular vernacular dialects, which had enjoyed the patronage of the Andhra kings. The rise of Sanskrit—the special vehicle of expression of the Brahmanical Pandits—was accompanied by the corresponding rise of Puranic Hinduism to popular favour, and proceeded side by side with the gradual decline of Buddhism; with the result that by the end of the Gupta period the force of Buddhism on Indian soil had been nearly spent, and India, with certain outstanding local exceptions, had again become the land of the Brahmins. This literary revolution was necessarily accompanied by changes in the art of architecture. The form of buildings specially adapted for the purpose of Buddhist ritual dropped out of use, and remarkable developments in the design of the Hindu temple were

Skandagupta.

The rise of Sanskrit and Puranic Hinduism—its effect on architecture.

elaborated, which ultimately culminated in the marvellously ornate styles of the mediæval period (9th to 12th century A. D.).

Remains of the earlier Guptas.

Few remains of the earlier period of the Guptas are left to us, and within the province of Bihar and Orissa the only examples known are the Sonbhandar cave, with its 4th century inscription, and the Maniyar Math, already mentioned in connection with Rajgir; while the later-architectural front, carved to simulate the wooden frame of an original structural prototype, and added to an earlier cave known as the Lomasrishi, in the Barabar hills, near Gaya, is also assignable to this period.

Bihar Fort.

Another monument which seems to date back to the Gupta period is the fort of Bihar; though little indeed now remains of its walls. Two important Sanskrit inscriptions engraved on a sand-stone pillar 14 feet high found here, and now in the Patna Museum, belong to the reign of Kumara Gupta (413-455) and his son Skandagupta (455-480) respectively. The former inscription refers to the pillar as a sacrificial post, and records the construction of a group of temples by Kumara in a grove of fig trees and castor-oil plants. The second record gives the genealogical tree of the Guptas from the "Maharaja Ghatot Kacha, the great grandson of the Maharaja, the illustrious Gupta."

Chandesvara Pillar at Jajpur (Orissa.)

Another monument which may be assigned to this period is the Chandesvara pillar at Jajpur in the Cuttack district, a monolithic shaft some 20 feet high, set upon a high stepped base, and bearing a capital ornamented with carved Kirthi-mukha heads with heavy pearl garlands pendant.

Narasinha Baladitya and the later Guptas.

The outstanding figure of the lesser Guptas, whose rule extended down to about the year 720 A.D. over a continually diminishing territory, was the king Narasinha Baladitya. His expulsion of the Huns under Mihiragula in 528 A.D. finally freed the Gangetic plain from these barbarians. Of the later Gupta period, the archæological remains extant are again very few and are perhaps principally exemplified in this province by certain of the earlier strata of occupation disclosed in the excavation of the Buddhist monastic site at Nalanda near Bihar, which was commenced by the Archæological Department in 1916.

The remains at Nalanda will be described in connection with the reign of Harsha, with whom they are contemporaneous to a greater extent.

Another monument which appears to be ascribable to this period is the remains of an ancient fort at Manjhi in the Saran district.

Manjhi fort.

A brick bearing the inscription Sri Prathamaditya in characters of about the 6th century A.D. was found on the site in 1915 by Dr. Spooner, who suggests that the name may conceivably be that of a hitherto unknown prince of the Gupta dynasty. The ramparts of the fort rise some 30 feet above the surrounding fields, and the mound containing these remains measures some 1,000 feet east to west by 1,400 north to south.

The next important event in the history of the province was the reign of Harsha. His empire originated with the territory of Thaneswar in the Punjab, but within six years of his accession he had extended it over most of northern India; while at the end of his reign, about 648 A.D., his sway was undisputed from the Himalayas to the Narbada, though detailed administration remained in the hands of the local rajahs. In the last five years of his reign, however, he devoted himself to the arts of peace. He began to show marked favour to the quietest teachings of Buddhism, first in the Hinayana and afterwards in its Mahayana form; and it would seem that the earlier example of the Maurya, Asoka, had much influence on his activities. Buddhist institutions on the Asokan model for the benefit of travellers, the poor and sick, were established throughout the empire; rest-houses were built in both urban and rural parts, and physicians were stationed at them to attend to the people's medical needs. The king also imitated his prototype in the foundation of various religious establishments devoted both to the service of the Hindu gods and Buddhist ritual. In his closing years, the latter creed received the chief share of the royal favour, and numerous monasteries and shrines were erected along the banks of the sacred Ganges.

The conquests and religious activities of Harsha.

Religious belief in India during the 7th century was of a curiously eclectic order. The members of the royal family, to which Harsha belonged, freely acted on their individual preferences in the matter of religion. His father was a devotee of Surya; his elder brother and

Toleration in religion.

sister convinced Buddhists, and Harsha himself distributed his devotions between Siva, the Sun, and Buddha. The eclectism of the royal family was the reflection and result of the state of popular religion at the time, and though Buddhism was still a powerful force its place as the dominant religion was being taken by Puranic Hinduism, though Jainism was still popular in certain restricted areas, notably at Vaisali and in Eastern Bengal. But while toleration and concord among these religions was the rule, exceptions occurred. The king of Central Bengal, Sasanka, a worshipper of Siva, entertained a hatred of Buddhism, which he did his best to destroy. It is recorded that he dug up and burnt the holy tree at Bodh Gaya, beneath which the Buddha attained enlightenment; broke the stone containing the foot-prints of Buddha at Pataliputra; destroyed the convents and scattered the monks, carrying his persecutions to the foot of the Nepalese hills. These events occurred about the year 600 A.D., some century and a quarter after the inroads of the Huns into Magadha.

Among the monastic establishments to suffer in this way is doubtless to be numbered Nalanda, the celebrated centre of Buddhist culture, which was founded at some time between the 5th and 7th centuries A.D., and of which an account may here conveniently be given.

Nalanda.

Yuan Chwang, a Chinese pilgrim (630-645 A.D.), records the tradition that 500 merchants purchased the site of Nalanda for ten *kotis* of gold pieces, and presented it to Buddha, who preached the law here for three months; with the result that most of the merchants attained the fruit of Arhatship. The pilgrim further mentions the erection of six monasteries by six kings in connected succession. One of these kings, Baladitya, is conceivably to be identified with the Gupta Narasinha Baladitya, c. 485-530 A.D.; but this is mere surmise and cannot be accepted as true in the absence of confirmation from independent sources. He goes on to say: "Moreover the whole establishment is surrounded by a brick wall, which encloses the entire convent from without. One gate opens into the great college, from which are separated eight other halls, standing in the middle (*of the Sangharama*). The richly adorned towers, and the fairy-like turrets like pointed hill-tops, are congregated together. The observatories seem to be lost in the vapours (*of the morning*) and the upper rooms tower above the

Yuan Chwang's description of Nalanda.

clouds. All the outside courts in which are the priests' chambers are of four stages. The stages have dragon-projections and coloured eaves, the pearl-red pillars, carved and ornamented, the richly adorned balustrades, and the roofs covered with tiles that reflect the light in a thousand shades, these things add to the beauty of the scene."

Present remains.

The remains at Nalanda include a range of numerous massive brick ruins of the great *stupas* attached to the monastery. Lying east of the *stupa* mounds, and running parallel to them is a maze of *viharas*, the original courtyards of which may possibly be traced in the square patches of cultivation set in a debris-strewn area of some 1,600 × 400 feet. These open spaces conceivably mark the positions of the courtyards of the six monasteries which Yuan Chwang describes. Detached mounds farther afield to the east, west and north mark the sites of other temples, while individual sculptures scattered all over the site point to the days of Nalanda's greatness. General Cunningham was of opinion that he met with the finest sculptures in India at this site; and it is probable that a considerable portion of the finest sculptures now in the Calcutta Museum, came from here. To the south of the monastery, according to Yuan Chwang, there was a tank in which it is said the dragon, or *Naga-Nalanda*, used to dwell. Cunningham identified this tank with the present small tank to the south called Kargidya Pokhar, which corresponds in position to the pool of the *Naga*.

Excavation by Dr. Spooner.

In March 1916 Dr. Spooner of the Archæological Department commenced the excavation of the area. In the course of operations patches of the pavement of a monastery, called by General Cunningham the monastery of Buddha Gupta, and a cross wall of one of the cells of the adjoining monastery to the south, ascribed by Cunningham to Sakraditya, were discovered a few feet below the surface. The north-western corner of the latter monastery was also cleared, disclosing what appeared at first to be a two-storeyed structure, though the upper storey has subsequently proved to be a later erection covering an earlier building. Some sculptured fragments were discovered in the few cells then cleared, as well as a small "blackish stone" plaque, in which the Buddha and his attendants were delicately cut.

The north wall of the southern monastery, on being disclosed, measured 205 feet and the side walls 168 feet. The wall is six and a half feet thick, which is increased by a foot on the west side. The quadrangle is rectangular; and is built of superior bricks of a reddish tint and admirable texture, rubbed so smooth that the brick joints are scarcely noticeable. The entrance to the monastery is in the centre of the west wall, where a grand staircase, 32 feet wide, is met with. The total height of the west wall externally is about 25 feet. Along the interior wall, on all the four sides, are rows of chambers which vary slightly in size but average some ten feet square. These latter are each provided with two bed-recesses, while two square niches appear in the chambers at the north-west and south-east corners. In front of the chambers there is a continuous walk or terrace.

Monastery No. 1 at Nalanda.

Further excavation disclosed the existence of no less than seven different main levels and periods of occupation on this single monastery site. Among these many levels the fourth and fifth strata down are perhaps the most interesting; for while the fifth and earlier level monastery was characterised by the existence of an open colonnaded verandah enclosing the interior courtyard, and the floor level of the monastery was common throughout its area, the fourth stratum containing the later monastery built on the site was divided between two levels; the courtyard here being retained approximately as before, but the enclosing cells raised to a height of some fifteen feet above it. When this alteration was made the original open colonnade of the fifth level was filled in solid with a brick wall to enclose the courtyard area.

An important find made in the entrance to the monastery no. I at the fifth level was a copper plate inscription of Sri Devapaladeva, the third sovereign of the Pala dynasty. The plate is surmounted by a seal bearing the Dharmachakra emblem flanked by two gazelles, and the inscription it contains, which is in Sanskrit, written in Devanagari characters, records the grant of five villages in the Gaya and Rajagriha districts of the Srinagar bhukti (*i.e.* Patna Division) for the up-keep of the Nalanda monastery and the provision of comforts for the monks and *bhiksus* arriving there from all quarters. The inscription further records that Devapaladeva made this endowment at the request of the king

Copper plate inscription found in fifth stratum.

of Sumatra, Sri Balaputra Deva—it would seem in return for an equivalent grant in that country. The inscription is dated in the year corresponding to 891 A.D.

Brick cave-like chambers in fourth stratum.

A feature of much interest in the fourth level of occupation are two structural cave-like chambers, built of brick with corbelled entrances, curiously resembling the rock-cut caves at Barabar. As these caves were cut with curving ceilings their imitation here has necessitated the covering of the chambers with a vaulted roof, which, though not actually the first, is among the first examples prior to Muhammadan influence. No exact date can yet be assigned to this building, but that it is pre-Muhammadan seems certain, and this invests the arch with real importance.

Evidence of a sixth stratum of occupation in the form of a fragmentary wall projecting from the east side of the quadrangle has latterly been revealed; and beneath it again there is a seventh level represented by a brick pavement covering the whole of the court.

The seventh stratum.

A feature of interest in this seventh stratum of the monastery site is the remains of a low *chabutra*, inset in which are duplicate panels in low relief of bird-bodied men worshipping a lotus plant. From the style of this decorative relief it would appear to date from the 7th or possibly the 6th century A.D.; a date independently indicated for this stratum by its depth below the 5th level of occupation where the Devapala copper-plate was found.

Later strata.

Intermediate between the third and fourth levels of occupation mentioned above are two further subsidiary levels indicated in a small *chaitya* in the centre of the court-yard; so that it would seem that, on the one site, buildings of no less than nine different periods in all, between the 5th and 12th centuries A.D., have been erected. The stratigraphic evidence contained in the earth through which the excavation has been sunk is of unusual interest, as it discloses with extraordinary clearness the vicissitudes through which the various successive structures have passed from the period of the original foundation of the monastery. Layers of ashes, potsherds, heavy brick debris, more ashes, and finally natural earth accumulation are most clearly defined, and serve at once as an indisputable record of

fire and destruction, and of the abandonment and subsequent re-occupation of the site.

Monastery No. 1A.

Overlapped at its north-east corner by monastery no. 1 which it adjoins, is the monastery designated 1A. It is entered on the north through a pillared portico, of which only the bases of the columns now remain, and a vestibule. The plan of the monastery is a rectangle containing seven chambers in each side, with the addition of what might possibly have been a shrine in the centre of the south side. An open-pillared verandah ran originally round the quadrangle, which is paved with bricks set out in a number of rectangular panels. In the centre are two parallel rows of hearths, seven in number, connected by a common duct of corbel construction about two feet high. This feature occurs again in the eastern verandah. Its purpose seems, at present, to defy explanation, but Pandit Hirananda Sastri, who excavated it, thinks it might have been used for preparing *rasas* or drugs, in which case the building would have been a medical seminary or *Bhishak-sala*. In the north-east corner of the court is an octagonal well, which on clearance yielded a number of earthen vases. The present water-level is about fifteen feet below the court. An important item of evidence for the chronology of this monastery is furnished by the circumstance of its walls, and those of the contiguous structure to the north-east of it, intersecting at two points; while the existence of the drain passing through its south-west corner and entering the *stupa* court of site no. 3 (*post*) reveals that the monastery had fallen to ruins and was deserted before the *stupa* came into existence.

The stone temple.

Immediately east of the monastery quadrangle ascribed to Baladitya by Cunningham, the four sides of a ruined stone temple, square in plan, were uncovered during the excavation in 1916; of which the most interesting feature is a dado of 211 sculptured panels over the exterior base moulding. There is a pleasing variety of sculpture figured on the panels of the dado; human couples in amorous postures; representations of *Makaras*; scroll foliage and geometrical patterns; again, elaborately dressed women seated in pairs; *Kinnaras* playing on musical instruments; a snake charmer, etc. The sculptures of deities include Siva and Parvati in separate panels; or together in one, where the goddess turns aside in fear on beholding the terrific form of her spouse; Kartikeya with the peacock;

Gaja Lakshmi; the gods Agni and Kuvera; the Kachchhappa Jataka cleverly represented; as also are scenes depicting archery. As the panels of the plinth, according to Dr. Spooner, are assignable to about the 6th or 7th century A.D., it would appear that these materials were taken from an older building and utilized in the decoration of this temple, the level of which in relation to the other strata disclosed in the Nalanda area postulates a considerably later date for it.

Stupas at Nalanda.

The high *stupa* at the southern end of a line of high mounds parallel to the range of monasteries has been identified by General Cunningham with that mentioned by Yuan Chwang as marking the place where the Lord Buddha dwelt for three months explaining the law to the gods. In the course of excavating this *stupa* three different integuments of masonry, each completely enclosing the previous one, were brought to light. It appears that the builders did not wait for the ruin of the older structure before renewing it, but enlarged the *stupa* by an altogether new masonry facing, leaving intact the Buddhist stucco figures on the face of the original solid structure, which seems to have had four towers abutting on the corners. Each successive addition followed the original plan, and to give suitable support to the additional masonry to be erected, a square frame-work of encasing walls was built on each side, the casing then being filled in to form a solid core for the enlarged *stupa*. The main *stupa* stands surrounded in the court by a large number of smaller *stupas*, built one over the other on the same spot, sometimes two and three times. As the main *stupa* increased in size, the level of the original court, too, generally rose, and many smaller *stupas* are found in several places half or completely buried in the various floors which have been unearthed. At present three distinct levels of the *stupa* court can be seen.

If we may identify them with Yuan Chwang's description, the high mounds lying in the middle and at the northern extremity of the range of *stupa*-mounds were two hundred and three hundred feet high, respectively. The latter of these Cunningham identifies with Baladitya's temple which, according to the Chinese pilgrim, closely resembled the temple of Bodh-Gaya. This last, however, in its present form, is actually only about one hundred and seventy feet high. The colossal statue of the ascetic Buddha called Batuk Bhairava, set

Some statues of Buddha.

up in an enclosure near the foot of this mound was, it would seem, originally enshrined in the temple itself. Another statue of Buddha in the Bhumisparsa attitude has also been set up near-by. It is attended by a standing figure on each side, and has two flying figures with garlands overhead. The names of them all are inscribed, the attendants being Arya Vasumitra and Arya Maitreya, and the flying figures Arya Sariputra and Arya Maudgalyana, the two principal disciples of Buddha, who being Arhatas possessed the power of flying through the air. In view of the traditional association of Nalanda with the Buddha and certain of his relics, and the fact that a *stupa* was said by Fa Hian to have been in existence there in his time (405-11 A.D.) marking the spot of the contemporary disciple Sariputra's decease, there is hope that some remains may yet be recovered of a far earlier period than those already disclosed, none of which can be dated anterior to the 6th century A.D.

Fame of Nalanda.

The fame of Nalanda throughout the mediæval period was far spread. Even with the political decadence of Magadha, Nalanda continued to enjoy a reputation as the centre of Buddhist culture, and retained it under the patronage of the Pala kings right up to the Muhammadan conquest, when the monasteries with their abundant libraries were burnt to ashes.

Various finds at Nalanda.

Numerous finds were made during the progress of the excavations, the bulk of the objects coming from monastery no. 1. A large number of small images of the Buddhist heirarchy were recovered, including two very fine sculptures of the Buddha seated in Bhumisparsa-mudra, and surrounded by scenes depicting the principal events of his life, from the birth to the Nirvana. Images of Puranic Hindu deities were also recovered on the site, affording further evidence of the general eclectism of the people in the matter of religious worship during this period. Seals, too, some special to the Nalanda monastery, and others of places outside it, were found in numbers; while earthen pots and vases of pleasing shape, ancient locks—identical with the country-made variety of the present day—incense burners, sceptres, and even coats of mail-armour were found; these last doubtless having some connexion with the sack of the monastery at some time during

its eventful existence. To none of the finds, however, can be assigned a date prior to the 6th century A.D.

Mundesvari temple at Ramgarh.

Another monument of Harsha's period is the Mundesvari temple at Ramgarh, in the Shahabad district. The shrine stands on the submit of an isolated hill close to the village. Both externally and internally the temple is of the shape of an octogon, with doors and windows in four of the sides and small niches for statues in the remaining walls. The principal entrance is on the west, where a few pillars of a ruined portico remain. Inside the temple is a four-headed stone linga (Chaumukha Mahadeva) and an image of Durga. The windows, of which the northern one still retains its perforated stone lattice, are decorated with graceful Gupta carvings. From an inscription found *in situ*, we learn that the temple dates from 635 A.D., and mention is made in the epigraph of a ruling chief named Udayasena, who made various donations to the shrine.

Patharghatta rock sculptures.

Another monument of this time is the rock sculptures at Patherghatta situated some eight miles north-east of Colgong, in the Bhagalpur district. The most interesting among them is a long row of figures locally called Chaurasimuni. They are situated a little below the summit of the hill, close to the Pataliputra cave. Among the images that have been identified are Vishnu, and his man, lion, dwarf, and boar incarnations. Their style points to the 6th—7th century.

Colgong rock temple.

After the death of Harsha little is known of the history of this part of India for more than a century and a half. A curious little monument, however, of approximately this period is the small rock-cut temple at Colgong, which stands on a small hill close to the Ganges. It is a solid mass of granite with a small excavation on its southern side, forming a small cell. The style of the temple is peculiar, and it is probably not later than 800 or 900 A.D.

Pala dynasty.

Early in the 9th century (c. 815 A.D.) a chieftain named Gopala became ruler of Bengal. He is said to have reigned forty-five years; and towards the close of his life he extended his power eastwards over Magadha or Bihar. His capital was at Bihar (Udandapura) which

had taken the place of Pataliputra, then in ruins. He is recorded to have been a pious Buddhist, and to have founded a great monastery at Bihar, the name of which is derived from a corruption of the Sanskrit word "Vihara," a monastery. Little is known in detail of the history of the dynasty he founded, designated as that of the Pala kings of Bengal.

Muhammadan conquest,

In Bihar and Bengal, both Palas and Senas—a dynasty which usurped the eastern territories of the Palas—were swept away by the torrent of Muhammadan invasion at the end of the 12th century, when Kutb-ud-din Aibak's general, Muhammad Ibn Bukhtiyar Khilji, stormed Bihar in 1197. Bihar was included in the Bengal Viceroyalty of the Delhi kings and, except for a short interval when it had a separate government, continued to be ruled from Bengal till 1320 A.D., when the Delhi Emperor Ghiyas-ud-din Tughlaq again separated it. In 1397 A.D. it was attached to the Sharqi kingdom of Jaunpur, and a century later became subject to the Muhammadan kings of Gaur.

Tomb of Malik Ibrahim Bayu at Bihar,

Of the monuments of the early Muhammadan period in the province the most noteworthy are those at Bihar, where the tomb of Malik Ibrahim Bayu—a warrior who overcame a Hindu chief of Rohtasgarh and subdued the warlike tribes of the province—dates from the year 1353. The structure is built of finely cut bricks, and is surmounted by a dome of curiously elongated shape, carried internally on a pendentive construction of triple concentric arches.

Pir Shah Nafa's Dargah at Monghyr.

Another Muhammadan monument of this early period exists at Monghyr in the *Dargah* of an unknown saint reputed to have been a disciple of Khwaja Muin-ud-din Chisti, the celebrated early Muhammadan missionary of Ajmir. This tomb dates from the year 1497, an inscription to that effect existing in the facade; but the structure is lacking in architectural interest. The shrine is known as that of Pir Shah Nafa, Nafa being the Persian word for musk; the scent of which emanating from his original burial place in the ramparts of the Monghyr fort, it is said, disclosed its hitherto unsuspected existence to the Afghan Governor, Prince

Monghyr fort.

Danyal, when engaged in their repair. Though the original fort is reputed to have been built by the early Muhammadan kings of Bengal, the present structure—to judge by its architectural style—does not appear to antedate the early Mughal period, when it was again repaired by the Emperor Akbar's famous Hindu deputy, Todar Mall, in 1580.

Begu Hajjam's Mosque, Patna City.

Another monument of the period of the Bengal kings is the mosque of Begu Hajjam, in Patna city, which was built in the reign of Alauddin Hussain Shah of that dynasty. It has, however, been subsequently repaired to a large extent, and a conspicuous feature of the repair is the enamelled tile paving in the prayer chamber and courtyard.

Babar.

Expulsion of the Mughals. Suri dynasty : Sher Shah.

In the 16th century the Bihar province begins to figure in the history of the Mughals, and the Emperor Babar is recorded to have advanced as far as Maner against the rebellious Afghan chiefs, who suffered defeat at Buxar in 1529. His death in 1530, however, encouraged the Afghans once more to assert their independence; and the struggle which ensued ended in the conquest of all northern India by Sher Shah Suri, as a result of the battle of Kanauj in 1540, when Babar's son Humayun was decisively defeated, and driven from India.

His tomb at Sassaram.

Of the several monuments in Northern India erected by Sher Shah, the most justly celebrated is his own tomb at Sassaram, in the Shahabad district of this province. This tomb, which is one of the noblest specimens of Pathan architecture in India, is an imposing structure of stone, standing in the middle of a fine tank about 1,000 feet square and rising from a large stone terrace. This terrace, 30 feet high and 300 feet square, rests on a large stone platform with a flight of steps leading to the water's edge; though for some unknown reason, it was not built squarely upon it, but placed obliquely to its sides. The following description of the tomb gives an account of the building as it existed between 1780-83 :—" The plan of the mausoleum is a square base, rising from the centre of the lake, having at each angle pavilions crowned with domes and finished with a callus; from this base was a bridge that, from the

ruins now remaining, must have consisted of six pointed arches which communicated to the side of the lake, and on two sides are a double flight of steps to the water; on the base is raised an octagon building, having three pointed arches in each face, and on each angle are pavilions finished like the former. Somewhat behind this runs an octagon 92 feet in diameter, and from the extremes spring the dome, which is finished on the top by a small pavilion like those already described." When Buchanan Hamilton, who contributes the foregoing description, saw the tomb, the dome was crowned by a small cupola supported on four pillars. On the buildings being restored by Government in 1882, this cupola was pulled down and replaced by a pinnacle similar to that on Hasan Khan Sur's tomb adjacent; and a causeway, 350 feet long, was built to connect the tomb with the northern side of the tank. Further attention has latterly been bestowed on the monument, and in 1914 the old flight of steep narrow steps, on the causeway across to the tomb, was considerably widened and improved with a view to making the approach more dignified and in keeping with the character of the structure. An improvement was also effected to the other end of the causeway, and the gate itself was made once more to serve its original purpose as an entrance to the monument, the former promiscuous approach thereto being railed off.

Tombs of Hasan Khan Sur and Aliwal Khan at Sassaram.

The tombs of Hasan Khan Sur (the father of Sher Shah), and of Aliwal Khan, the architect of these buildings, which also exist in the vicinity, are again worthy examples of this vigorous period of Pathan art.

Rohtasgarh.

A notable monument associated with Sher Shah is the Rohtas fort, which he is said to have obtained by a stratagem from a Hindu Raja in possession in 1539. From the security of this fort he was able to overrun Bengal and finally to inflict a decisive defeat on Humayun's forces, which resulted in the expulsion of the Mughal from India for a period of fifteen years (1540—55), during which time Sher Shah and his descendants held the Delhi kingdom. The fort, which is situated on an extensive plateau some 1,500 feet above sea-level, boasts a considerable antiquity, and is said to derive its name from a young prince Rohitesva, son of Raja Haris Chandra of the Solar dynasty, to whom the hill is held sacred. The fort has a circumference of some twenty-eight miles, and the principal fortifications now existing are at Raja Ghat and Kathkauliya. The only records

of Hindu times connected with Rohtasgarh are a few short rock-cut inscriptions at various places on the plateau, the earliest of which, however, dates back only to 1169 A.D.

Two shrines at Rohtasgarh.

The two temples at the north-east spur of the fort, called after Rohitas and Haris Chandra respectively, appear to date from the mediæval period. The former shrine stands on a high terrace approached by a long flight of wide steps. The mandapa has now practically disappeared, together with the upper portion of the Sikhara tower. The latter is square in plan with slight central projections relieving the facade, the walls of which are decorated with bold mouldings. In each central projection is an empty niche which formerly contained an image. The only carving is on the entrance doorway, on the lintel of which is depicted a small dedicatory figure of Ganesa, indicative of Saivite shrine.

Haris Chandra temple.

Close by this monument exists the Haris Chandra temple; a small pavilion-like structure, four-square in plan, and enclosed by a verandah with a square porch projecting boldly from the centre of each facade. The whole is encircled by a wide continuous *chajja*, and is imposed on a high *chabutra*, reached by a small flight of steps. Over the central chamber is a dome, and smaller domes occur over each protecting porch. The shrine is reputed to have been erected by Raja Man Singh.

Monuments of Sher Shah's reign at Rohtas.

Monuments dating from Sher Shah's reign here are the mosque and tomb of Habbas Khan, and the Jama Masjid. The mosque takes the usual form of a hall divided into three domed compartments by transverse arches, and contains nothing of distinctive character. These arches have recently been strengthened by building additional semi-circular arches beneath them, as the structure was in danger of collapse.

Tomb of Habbas Khan.

The tomb of Habbas Khan is built on an imposing scale, and is situated in a large square enclosure, with low octagonal turrets at each corner. It is square in plan: and from an octagonal-shaped drum above springs a fine dome; while four domed *chattris* crown the angles of the roof below it.

Jama Masjid.

Of the Jama Masjid an interesting feature is the Persian inscription on the facade, containing the name of Sher Shah. The mosque is of more interest

architecturally than that of Habbas Khan, the east facade being treated more decoratively and the proportions being more attractive. A notable feature of the interior treatment is the corbel construction adopted to negotiate the difference in shape between the square bays of the compartments and the circular domes above ; octagons and sexta-decagons intervening in the dome-drum between them.

The palace of Raja Man Singh.

A noteworthy feature of the fort is the palace, which was occupied and largely repaired by Raja Man Singh, Akbar's Viceroy of Bengal, for whom the fort served as a convenient stronghold. The buildings here are distinctive of the early Mughal style of architecture, and a notable feature of them is the *Hathi* gate which forms the main entrance to the palace.

Shergarh.

Still another monument of Sher Shah's reign is the now badly ruined hill fort of Shergarh, again in the Shahabad district. The *taikhanas* or under-ground rooms inside the palace constitute the most remarkable feature of the building. Most of them receive no light from above, and may have been used as store-rooms; one at least was used as a water-reservoir. One room in the northern courtyard, which is supposed to have been the zanana, was well lighted by means of a skylight, and may have been intended as a place of retreat for the ladies in time of siege or during the heat of the day. Just outside the palace are two open pillared halls, which are said to have been used as a diwan-khana, or offices; while close to one of the gates leading into the palace there is a mosque.

Bakhtiyar Khan's tomb at Chainpur.

Another monument of this period is the great mausoleum of Bakhtiyar Khan, at Chainpur in the Shahabad district; a monument endowed with all the virile qualities that are associated with the architecture of Sher Shah. Local tradition asserts that Bakhtiyar's son married a daughter of Sher Shah; but there is no record of what part Bukhtiyar Khan played in the history of the Suri kings.

Returns of the Mughals. Humayun.

With the return of the Mughal Humayun, and the defeat of the Suris at Panipat in 1555, the Afghan rule of Northern India came to an end; and the province of Bihar was absorbed into the Mughal Empire as a result of the campaigns of the Emperor Akbar, who succeeded to the Delhi throne in the following year.

A noteworthy monument of the early Mughal period is the tomb of Makhdum Shah Daulat, or the Choti Dargah, at Maner, in the Patna district, which was erected between the years 1608 and 1616, by Ibrahim Khan, the Mughal Governor of Bihar, who was one of the saint's disciples. The building is an exceptionally fine one, with walls containing carving of great delicacy and high finish. Square in plan, and surmounted by a large dome, it stands on a raised platform, and is enclosed by an open verandah on all sides. At each corner of the tomb rise domed pavilions of graceful proportions. Picturesquely located by the side of a huge tank, it is perhaps the finest monument of the Mughals now extant in the province.

Tomb of Makhdum Shah Daulat at Maner.

Two other notable monuments in the province dating from this period are the old and new forts at Palamau, the architecture of which is distinctively early Mughal. The forts were built by the local Chero Chiefs, Medina Rai and his son, Pratap Rai; and an outstanding feature of the latter's fort is the finely carved stone gateway, now unfortunately much ruined, which serves as the entrance on the south.

Palamau Forts.

Of the sequence of Mughal Viceroys of Bihar and Bengal one of the outstanding figures is Raja Man Singh, whose headquarters appear to have been located for some time at Rajmahal in the Santal Parganas, one of the several capitals of the province; and a further memorial of his viceroyalty is to be found in the mosque and bridge at Hadaf, some five miles away. The mosque is a fine specimen of the Mughal style, though certain of its features recall the architecture of the Jaunpur kings. It is now much ruined and bereft of half of its prayer chamber. The Mughal bridge near-by is a structure some 240 feet long of six openings, spanned by pointed arches.

Mosque and bridge at Hadaf (Santal Parganas.)

After the defeat by the Emperor Akbar of his rebellious deputy, Daud Khan, in 1574, Patna became the headquarters of the Mughal Governors, who ruled over the whole of Bihar. During the period of their rule the city witnessed the proclamation of two Mughal emperors, and it had more than once for its Subadar, or Governor, a prince of the royal blood. In 1612 it was stormed by the pretender Khusru, who

Patna.

gave up the city to plunder and had himself proclaimed Emperor in the governor's palace. Ten years later it was seized by Shah Jahan, who had his court here for a short time during his rebellion against his father; and in 1626 Prince Parwez Shah, another son of Jahangir, commemorated his rule by building the mosque in Patna city, now known as the Pathar Masjid.

Sangi Dalan : Rajmahal (Santal Parganas.)

A monument of Shah Shuja's viceroyalty of Bengal under Shah Jahan exists in the so-called Sangi Dalan at Rajmahal (Santal Parganas) which then again served as the capital of the province. The structure, which is situated on the banks of the Ganges, is now all that remains of the viceregal palace, and consists of an open colonnaded pavilion flanked by smaller rooms at each end, the whole structure with its whaleback roof being characteristic of the later Mughal style.

Tombs of Ghulam Hyder Khan and Shuja Kuli Khan at Buxar.

Of later monuments in Bihar that are protected, there are few which need be mentioned. An interesting relic of the battle of Buxar in 1764, by which the British became possessed of the Lower Provinces of Bengal, is the tombs of Ghulam Hyder Khan and Shuja Kuli Khan, who fell in the action. Of the Mutiny of 1857 a notable memorial in the province is the Arrah house at Arrah, in the Shahabad district, a small two-storeyed structure, some fifty feet square externally, which was the scene of a very gallant defence against overwhelming odds.

The Mutiny of 1857. Arrah House.

Orissa.

To revert to Orissa: After its absorption into Asoka's empire as part of the kingdom of Kalinga, and its subsequent independence under the King Kharavela, who, as recorded in the 2nd century B. C. inscription at Khandagiri, carried his arms into the heart of the Magadha empire and compelled the emperor to sue for peace, it appears to have acknowledged the sovereignty of the Andhras early in the 1st century B.C. on their suppression of the Kanva dynasty of Magadha. To this dynasty the introduction of Buddhism into Orissa is attributed.

The Andras.

The next event recorded in the history of Orissa is its having been subdued by the powerful king of Bengal, Sasanka, about the

end of the 6th century. A few years afterwards it was conquered by Harsha, and on the death of that king and the dismemberment of his empire, asserted its independence (according to the Madala Panji, or "Palm leaf chronicles," of the temple of Jagannath) under the Kesari or Lion Dynasty, to which are attributed most of the Bhuvaneswar temples; though the authenticity of these records, and the very existence of the Kesari dynasty, is denied by certain eminent authorities. According to an inscription in a temple at Bhuvaneswar, however, there were five Kesari kings, the last being Udyota Kesari, who was king of Kalinga and defeated the Simhalas, Chodas and Gandas.

Kesari dynasty.

Dr. Bloch writes, in this connexion, that during the 10th and 11th centuries A.D., Orissa was ruled over by kings of the Lunar race whose names alternate between Bhavagupta and Sivagupta; that both these names signify "protected by Siva"; and that the kings thus called were probably worshippers of that deity. "Now, as Bhuvaneshwar is the great stronghold of Siva worship in Orissa, in opposition to the Vishnu worship at Puri, and to the Surya worship at Konarak, one may venture to assume that Bhuvaneshwar owes its importance as such, to those very kings of the lunar race who ruled over it in the 10th and 11th centuries A.D., and who were, as we have inferred from their names, devoted to Saivism." *

Lunar dynasty.

However, this may be, the magnificent remains at Bhuvaneshwar afford evidence of a wealthy and highly civilised kingdom. These stately temples show the hold which Hinduism has obtained in Orissa by this time; and no trace is found of the Buddhism which, according to tradition, was introduced several centuries earlier.

Bhuvaneshwar temple.

One of the temples of this group at Bhuvaneshwar, is the Raja Rani. This temple, which on stylistic grounds may be considered to be one of the later examples of the distinctive Orissa temple architecture, is of comparatively small size, but the plan is arranged to give great variety of light and shade, and the details are of much beauty. It has been described by Fergusson as one of the gems of Orissa art. The temple consists of the usual *sikhara* and *jagamohan* of

Raja Rani temple.

* A. S. R. 1902-08.

solid proportions and, as is typical of the temples of its period and style, contains no columns in its design. A feature strongly developed in this temple is the decoration of the *sikhara* tower by multiple repetitions of itself in miniature, to such an extent as almost to obliterate the original form of the temple.

Evidences of Jainism.

Jainism, too, appears to have retained its hold on the affections of the people; and in the caves at Khandagiri and Udayagiri are also found inscriptions and rock-cut images of Jaina saints ascribable to the same period as the Bhuvaneshwar temples.

Choda Ganga; and Jagannath temple at Puri.

At the close of the 11th century Orissa was effectively subdued by the Eastern Gangas of Kalinganagara (the modern Mukhalingam of the Ganjam district), and the rule of this dynasty, comprising eighteen kings, lasted till 1435. Of these kings, the most powerful was Choda Ganga, who extended his dominions from the Godavari to the Ganges and built the famous temple Jagannath at Puri. Another of these kings, Narasinha I (1238-64), was the builder of the beautiful temple of Konarak, which is dedicated to the sun-god Arka at Kona. Of this temple at Konarak Sir John Marshall writes: "There is no monument of Hinduism, I think, that is at once so stupendous and so perfectly proportioned, and none which leaves so deep an impression on the memory." The temple is sadly ruined, the greater part of the main shrine having collapsed; but steps for the preservation of this important relic have been taken by the Archæological Department, and the remains have been made secure against further dilapidation. The temple compound, measuring some 890 feet by 540 feet, was originally surrounded by a wall crowned by battlements, in the east side of which was the principal gateway; but little trace of the wall now remains. The main shrine rises from a high plinth which, in common with the rest of the structure is covered with elaborate carvings and sculptures. Its distinctive feature is, however, the great chariot wheels carved at intervals along the side. The temple *sikhara* or tower has almost wholly collapsed, and now only the *jagamohan* or porch remains. This, however, is relatively intact. Architecturally the great beauty of the temple arises from the form of the roof over this portion. Of pyramidal shape it is divided into three main storeys, each subdivided by

Narasinha I; and temple of Konarak.

multiple cornice-mouldings broken around the projections to give vertical relief to the dominant horizontal lines. The play of light and shade which this treatment induces is of singular charm; while further interest is afforded by the bands of tiny figures cut into the face of the mouldings. A corresponding elaboration is carried down on to the main facade, giving unity and coherence to the whole design. Internally, the structure is singularly plain, the roof being formed by a simple corbelled construction following approximately the line of the exterior slopes, and supporting a flat slab ceiling carried on wrought iron beams. A smaller temple dedicated to Mayadevi, and subsidiary to the main shrine, exists in the same compound; and other features of interest are the large figures of horses and elephants set up on detached platforms within the area.

Hindu bridge at Jajpur.

Another interesting monument of pre-Mughal times in Orissa is the Tentulimul bridge at Jajpur, in the Cuttack district. It is a structure of eleven spans, and the outstanding feature of its construction is the system of corbelling between the piers which takes the place of the usual arches of later times. The bridge is about 240 feet long and 32 feet wide, its piers being about 10 feet in width. Pieces of carved stone, set promiscuously here and there in the stone-facing of the bridge, have evidently been taken from an older building, and reused here in the course of subsequent repairs.

Another Hindu bridge.

Another bridge of the Hindu period is the Atharanala bridge over the Mahdepur stream in the Puri district. It, again, is of the same characteristic corbel construction; and is said to have been built in the 13th century.

From 1200 to the middle of the 16th century the Hindu kings of Orissa—the most important of whom were those of the Solar dynasty—were largely and for the most part ineffectively occupied in opposing Muhammadan invasions. Mukandadeva, a Telugu by birth, was the last independent king of Orissa. In 1564 he concluded a treaty with the Mughal Emperor Akbar, which was intended as a counterpoise to the threats of the Afghans in Bengal; but the measure did not long help him, and Orissa was shortly afterwards ravaged by its enemies on both north and south frontiers. In 1568 Mukandadeva was slain in an encounter with a rebellious feudatory, while resisting an invasion by the forces of

Mirza Sulaiman, ruler of Bihar and Bengal; and the Hindu kingdom fell into the hands of the Afghans.

A monument of the period of Mukandadeva is the fort of Barabati, at Cuttack. In the Ain-i-Akbari it is described as a fine palace consisting of nine courts, the first of which was used for the elephants, camels and horses; the second was a store-house for the artillery and military stores, and also contained quarters for the guards and other attendants; the third was occupied by porters and watchmen, the fourth by artificers and the fifth by the kitchens. The sixth contained the Raja's public apartments, the seventh was used for the transaction of private business, the eighth was the zenana, and the ninth contained the Raja's own sleeping apartments. The fort had double walls of stone and enclosed a rectangular area of some 2,150 by 1,800 feet. Little now remains of the monument, however, in which are now located various modern buildings of the civil station. The remainder of the history of Orissa is largely that of Bihar, and is unimportant from the point of view of the archæology of the province.

Barabati fort at Cuttack.

APPENDIX A.

Of the monuments mentioned in this chapter the following have been declared protected monuments under the Ancient Monuments Preservation Act in the Government Notifications mentioned against each.

Serial No.	Name of the Monument.	Number and date of the Notification.
1	Cities of old and new Rajagriha ...	Misc.-2836, dated the 7th July 1908.
2	Kumrahar remains of "Hall of hundred columns".	No. 380-E.R., dated the 14th January 1921.
3	Bulandibagh	Ditto ditto.
4	Panch Pahari	Ditto ditto.
5	Agam Kuan or "Asoka's Hell" ...	No. 380-E.R., dated the 28th July 1922.
6	Asoka's edict pillars	No. 855-E., dated the 17th May 1917.
7	Number of mounds in the defile known as the "Hasra Kol" by the side of the Sobnath Hill, south-west of Wazirganj in Gaya district.	No. 3843, dated the 1st October 1909.
8	Bodh Gaya temple	Not notified by Government of India, but maintained by provincial Government as a special case.
9	Caves at Barabar and Nagarjuni ...	No. 2793-E., dated the 27th July 1921.
10	Caves at Udayagiri Hill	No. 2525-E., dated the 27th December 1912.
11	Khandgiri caves	Ditto ditto.
12	Barabhuji caves	Ditto ditto.
13	Remains of Bihar fort	No. 2797-E., dated the 27th July 1921.
14	Chandesvara pillar at Jajpur (Orissa) ...	No. 2638-E., dated the 18th July 1921.
15	Remains of an ancient fort at Manjhi (Saran).	No. 2051, dated the 25th April 1910.

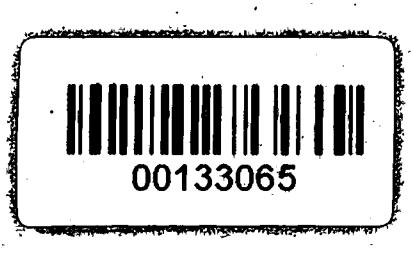
Serial No.	Name of the Monument.	Number and date of the Notification.
16	The Nalanda site	No. 613-E.R., dated the 17th August 1922 (provisional).
17	Mundesvari temple at Ramgarh (Shahabad)	No. 1510-E., dated the 4th July 1914.
18	Patherghatta rock sculptures (Bhagalpur)	No. 866-E., dated the 19th May 1915.
19	Colgong rock temple (Bhagalpur) ...	Ditto ditto.
20	Tomb of Malik Ibrahim Bayu at Bihar ...	No. 1589-E., dated the 27th August 1915.
21	Pir Shah Nafa's Dargah at Monghyr ...	No. 1330-E., dated the 12th July 1915.
22	Monghyr fort	Ditto ditto.
23	Begu Hajjam's mosque in Patna City ...	No. 541-E.R., dated the 15th June 1920.
24	Tomb of Sher Shah at Sassaram ...	No. 1930, dated the 6th September 1907 and No. 1589, dated the 27th August 1915.
25	„ Hasan Khan Sur at Sassaram ...	Ditto ditto.
26	„ Aliwal Khan „ „ ...	Ditto ditto.
27	Rohtasgarh (Shahabad District) ...	No. 1589-E., dated the 27th August 1915.
28	Shergarh „ „ ...	Ditto ditto.
29	Bakhtiyar Khan's tomb at Chainpur ...	No. 1510-E., dated the 4th July 1914.
30	Tomb of Makhdum Shah Daulat at Maner (Patna District).	No. 1589-E., dated the 27th August 1915.
31	Old and new forts at Palamau ...	No. 169-E, dated the 14th January 1921.
32	Mosque and bridge at Hadaf (Santal Parganas).	No. 1330-E., dated the 12th July 1915.
33	Sangi Dalan at Rajmahal (Santal Parganas)	No. 1334-E., dated the 12th July 1915.
34	Tombs of Ghulam Hyder Khan and Shuja Kuli Khan at Buxar.	No. 1589-E., dated the 27th August 1915.
35	Arrah house at Arrah	No. 495-E., dated the 7th April 1916.
36	Raja Rani temple of Bhuvaneshwar in Orissa.	No. 2488-E., dated the 1st November 1913.
37	Hindu bridge at Jajpur	No. 2638, dated the 18th July 1921.
38	Atharanala bridge over Madhepur stream in Puri.	No. 575-E., dated the 22nd March 1915.
39	Barabati fort at Cuttack	Ditto ditto.

APPENDIX B.

The most important repairs that have been done during the last 10 years in the Government notifications mentioned against each.

Serial No.	Name of Monument.	Amount spent.	In the year.
		Rs.	
1	"Shell inscription" cut into rocky path through the Banganga defile, at Rajgir.	1,080	1919
2	Agam Kuan, Patna	1,050	1914
3	Edict pillar at Rampurva	1,450	1913-14
4	Udayagiri hill caves, Orissa	800	1915-16
5	Khandagiri caves „		
6	Barabhuji caves „		
7	Mundesvari temple at Ramgarh	3,000	1915-16
8	Patherghatta rock sculptures	800	1915
9	Tomb of Malik Ibrahim Bayu at Bihar ...	177	1914 & 1919
10	Monghyr fort	5,600	1920
11	Begu Hajjam's mosque in Patna City ...	570	1922
12	Tomb of Sher Shah at Sassaram	3,000	1915
13	Tomb of Hasan Khan Sur at Sassaram ...	800 2,030 5,694 8,524	1913
14	Tomb of Alival Khan at Sassaram	2,077	1912
15	Rohtasgarh	946	1920
16	Bakhtiyar Khan's tomb at Chainpur (Chaukidar kept).	13,350	1914-15
17	Tomb of Makhdum Shah Daulat at Maner ...	1,030	1914 & 1921
18	Mosque and bridge at Hadaf (Santal Parganas) ...	1,400	1915

Serial No.	Name of Monument.	Amount spent.	In the year.
		Rs.	
19	Sangi Dalan at Rajmahal	130	1914
20	Arrah House at Arrah	3,000	1918-19
21	Temple of Konarak at Kona	1,10,500 also 10,000	1901-1914-15
22	Hindu bridge at Jaipur	975	1921
23	Barabati fort at Cuttack	300	1913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